(6) Unit 2: E.O. 2; Jim Hogg County, Texas.

(i) Unit 2 consists of 6.57 ac (2.66 ha) in a geographic cluster of 10 polygons in northwest Jim Hogg County and is composed of lands in private ownership.

(ii) Map of Unit 2 is provided at paragraph (5)(ii) of this entry.

* * * * *

Martha Williams,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 2024–05700 Filed 3–18–24; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R6–ES–2023–0114; FF09E22000 FXES1113090FEDR 245]

RIN 1018–BH01

Endangered and Threatened Wildlife and Plants; Removal of the North Park Phacelia From the List of Endangered and Threatened Plants

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; availability of draft post-delisting monitoring plan.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to remove the North Park phacelia (*Phacelia formosula*) from the Federal List of Endangered and Threatened Plants due to recovery. The best available scientific information indicates that threats to North Park phacelia identified at the time of listing in 1982 are not as significant as originally anticipated and are being adequately managed. Additionally, recent taxonomic studies have indicated that the species has four new populations and an expanded range in Colorado based on the inclusion of plants previously thought to be different species or subspecies. We find that delisting the species is warranted. Our review of the best available scientific and commercial data indicates that the threats to the North Park phacelia have been eliminated or reduced to the point that the species no longer meets the definition of an endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). Accordingly, we propose to delist the North Park phacelia. We request information and comments from the public regarding this proposed rule and the draft post-delisting monitoring (PDM) plan for the North Park phacelia. If we finalize this rule as proposed, the prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, would no longer apply to the species.

DATES: We will accept comments received or postmarked on or before May 20, 2024. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. eastern time on the closing date. We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by May 3, 2024.

ADDRESSES: You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal: *https://www.regulations.gov.* In the Search box, enter FWS–R6–ES–2023–0114, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on ''Comment.''

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R6–ES–2023–0114, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We will post all comments on *https://www.regulations.gov.* This generally means that we will post any personal information you provide us (see Information Requested, below, for more information).

Availability of supporting materials: This proposed rule and supporting documents, including the 5-year reviews, draft post-delisting monitoring plan, and the species status assessment (SSA) report, are available at *https://www.regulations.gov* under Docket No. FWS–R6–ES–2023–0114 and at the Colorado Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Nathan Darnall, Western Colorado Supervisor, U.S. Fish and Wildlife Service, Colorado Ecological Services Field Office, 445 West Gunnison Avenue, Grand Junction, CO 81501; telephone 970–628–7181. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States. Please see Docket No. FWS–R6–ES–2023–0114 on *https://www.regulations.gov* for a document that summarizes this proposed rule.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, a species warrants delisting if it no longer meets the definition of an endangered species (in danger of extinction throughout all or a significant portion of its range) or a threatened species (likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range). The North Park phacelia is listed as endangered, and we are proposing to delist it because we have determined it does not meet the Act's definition of an endangered or threatened species. Delisting a species can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 *et seq.*).

What this document does. This action proposes to remove North Park phacelia from the List of Endangered and Threatened Plants (*i.e.,* ''delist'' the species) based on its recovery.

The basis for our action. Under the Act, we may determine that a species is an endangered species or a threatened species because of any of five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. The determination to delist a species must be based on an analysis of the same factors.

Under the Act, we must review the status of all listed species at least once every 5 years. We must delist a species if we determine, on the basis of the best available scientific and commercial data, that the species is neither a threatened species nor an endangered species. Our regulations at 50 CFR 424.11 identify three reasons why we might determine a species should be delisted: (1) The species is extinct, (2) the species does not meet the definition of an endangered species or a threatened species, or (3) the listed entity does not meet the definition of a species. Here, we have determined that, based on an analysis of the five listing factors, the North Park phacelia has recovered and

no longer meets the definition of an endangered species or a threatened species; therefore, we are proposing to delist it.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other concerned governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule.

We particularly seek comments concerning:

(1) Reasons we should or should not remove the North Park phacelia from the List of Endangered and Threatened Plants.

(2) Relevant data concerning any threats (or lack thereof) to the North Park phacelia, particularly any data on the possible effects of climate change as it relates to habitat, as well as the extent of State protection and management that would be provided to this plant as a delisted species.

(3) Current or planned activities within the geographic range of the North Park phacelia that may have either a negative or positive impact on the species.

(4) Considerations for post-delisting monitoring, including monitoring protocols and length of time monitoring is needed, as well as triggers for reevaluation.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, do not provide information necessary to support a determination. Section 4(b)(1)(A) of the Act directs that determinations as to whether any species is an endangered species or a threatened species must be made solely on the basis of the best scientific and commercial data available.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit information via *https://www.regulations.gov,* your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *https://www.regulations.gov.*

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on *https://www.regulations.gov.*

Our final determinations may differ from this proposal because we will consider all comments we receive during the comment period as well as any information that may become available after this proposal. For example, based on the new information we receive (and any comments on that new information), we may conclude that the species should remain listed as endangered, or we may conclude that the species should be reclassified from endangered to threatened. We will clearly explain our rationale and the basis for our final decision, including why we made changes, if any, that differ from this proposal.

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES**. Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing. We may hold the public hearing in person or virtually via webinar. We will announce any public hearing on our website, in addition to the **Federal Register**. The use of virtual public hearings is consistent with our regulation at 50 CFR 424.16(c)(3).

Peer Review

A species status assessment (SSA) team prepared an SSA report for the North Park phacelia to inform the 2021 5-year review and updated it in 2023. The SSA team was composed of Service biologists who consulted with other species experts. The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both negative and beneficial) affecting the species.

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing and recovery actions under the Act, we solicited independent scientific review of the information contained in the North Park phacelia SSA report. We sent the SSA report to three independent and appropriate peer reviewers and received three responses. Results of this structured peer review process can be found at *https://www.regulations.gov* at Docket No. FWS–R6–ES–2023–0114. We incorporated the results of these reviews, as appropriate, into the final SSA report, which is the foundation for this proposed rule.

Summary of Peer Reviewer Comments

As discussed in Peer Review above, we received comments from three peer reviewers on the draft SSA report. We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the information contained in the SSA report. The three peer reviewers provided additional information, clarifications, and recommendations pertaining to changes to our threat evaluation for residential development, energy development, livestock use, and agriculture; changes to our current and future condition metrics; changes to our scoring of future condition; and an evaluation of the pollinators of North Park phacelia. We summarize the peer reviewers' main comments below and have either incorporated these points into the SSA report or address them below.

(1) Comment: One reviewer asked if there is a potential habitat model for North Park phacelia and whether there is unsurveyed, potential habitat for the species. The reviewer asked how far north the Niobrara formation extends and if the species could be found in Wyoming.

Our response: We developed a potential habitat model for North Park phacelia in 2022 after the recent genetic study (Naibauer and McGlaughlin 2022, entire) confirmed there are four additional populations of North Park phacelia in Larimer and Grand Counties, Colorado. The potential habitat model included the three soil types (Coalmont, Niobrara, and Troublesome Creek formations) on which the species occurs across its range. Based on this model, there is unsurveyed potential habitat for North Park phacelia within its range, which is not surprising because of the recent expansion of the species' known range

(see Background, below). The Niobrara formation does extend north into Wyoming, and habitat assessments would have to be performed to determine whether they in fact contain suitable habitat for North Park phacelia. If there is suitable habitat in Wyoming, surveys would have to be performed to assess occupancy. Our proposal to delist is not dependent on populations occurring in Wyoming.

(2) Comment: One reviewer asked whether we checked the SEINet data portal and NatureServe Encyclopedia of Life, both available online, for North Park phacelia location information and, if so, recommended that we cite them as sources of information.

Our response: We reviewed both websites, but they did not contain any new or additional location information for North Park phacelia beyond what we have on file. Therefore, we did not cite them as sources of information.

(3) Comment: One reviewer recommended that we include the Colorado Natural Heritage Program (CNHP) and NatureServe global (G2) and State (S2) ranks for North Park phacelia in the SSA report.

Our response: We declined to include the CNHP and NatureServe global and State ranks provided by the reviewer in the SSA report because they may be inaccurate and out of date based of the results of the recent genetic study (Naibauer and McGlaughlin 2022, entire) that confirmed the species has four additional populations. The data sources identified by the peer reviewer are also not critical to our evaluation of North Park phacelia's viability.

(4) Comment: One reviewer recommended that we provide the years associated with the range of total plant abundance (908 to 17,750 plants) reported for the North Park basin (Jackson County, Colorado) in chapter 2 of the SSA report. The reviewer asked whether this range reflected a trend, pattern, or simply the result of rosettes (young, non-flowering plants) not being counted in some surveys.

Our response: We removed the information from the SSA report pertaining to the reviewer's comment and instead summarized the range of plant abundance for each population in a table (Service 2023, table 3, p. 11). The recommended information, years and range of plant abundance reported for the North Park basin, are summarized in the species' 2012 5-year status review (Service 2012, table 1, pp. 7–8). In 2012, we noted that some surveys counted rosettes while others did not, and the available data does not allow us to compare years or identify a trend (Service 2012, p. 8). The best available trend information is from the Bureau of Land Management (BLM) plant frequency monitoring results, which we summarize below and in the SSA report (see Background, below; Service 2023, pp. 25–27).

(5) Comment: One reviewer recommended that we add more information to the key findings section in chapter 2 to mention if there are years when the species has low numbers or if there are only areas with low numbers because of the variability of local rain events. The reviewer asked if there were more key findings and citations to add to make that section more robust.

Our response: The key findings section is a summary of the individual, population, and species needs discussed in chapter 2. We added more key findings to this section of the SSA report to partially address the comment. However, we did not include citations because this section is a summary of information presented earlier in the chapter with citations. We also did not add information regarding years and areas with low numbers in chapter 2. Rather, we included information regarding the variability of local weather patterns, and discussed how the species responds to climate conditions in chapter 3 (Service 2023, pp. 23, 25–27).

(6) Comment: One reviewer stated that the SSA report does not reach a clear conclusion about the current condition of North Park phacelia relative to each of the identified threats. The reviewer recommended that we clearly state what the threats are and mentioned three reports (The Colorado Rare Plant Guide (CNHP 2015a, entire), CNHP element occurrence records (CNHP 2020 entire), and North Park Phacelia Conservation Action Plan 2011 Update (Panjabi and Neely 2011, entire)) that document threats to the species.

Our response: We identified threats to North Park phacelia and evaluated their individual and potential cumulative effect at the population level in our assessment of current condition in chapter 3 of the SSA report and below (Service 2023, pp. 19–35; Summary of Biological Status and Threats). The draft SSA report includes information on threats from two of the reports the reviewer mentioned, the Colorado Rare Plant Guide and CNHP element occurrence records. We reviewed the third report, the North Park Phacelia Conservation Action Plan 2011 Update, which evaluated the viability of North Park phacelia using similar metrics as our assessment. While we cited all three reports in the SSA report to address the comment, we primarily relied on the information summarized in the CNHP element occurrence records for our threats assessment, because this report provides threat documentation over a longer timeframe and with more recent information than the other two reports.

(7) Comment: One reviewer disagreed with our assertion in the draft SSA report that threats are either absent or less severe now than described at the time of listing based on data provided by CNHP. The reviewer stated that CNHP occurrence records identify livestock trampling as a threat and document plants trampled by livestock and that it is not known if those plants survived.

Our response: The reviewer is referring to the following sentences in the draft SSA: ''In the final rule to list *Phacelia formosula* as an endangered species under the Act (September 1, 1982; 47 FR 38540), we identified motorcycle (also known as, off road vehicle or ORV) use, cattle trampling, the potential development of resources (coal, oil, and natural gas), and the inadequacy of existing regulatory mechanisms as primary threats to the species. Data provided by CNHP indicate an absence of these threats within *P. formosula* populations, or that these threats are less severe now than described at the time of listing.''

The last sentence pertains to all threats identified at the time of listing, and we stand by our assertion that livestock grazing is a threat that is less severe now than when we listed North Park phacelia in 1982 (see *Conservation Efforts and Regulatory Mechanisms,* below). To address this comment, we amended the sentence to clarify that CNHP data indicate either an absence of threats or that threats are less severe now than described at the time of listing in the SSA report. We summarized the CNHP data regarding livestock grazing in more detail later in chapter 3 (Service 2023, pp. 19–22). While some plants have been trampled by livestock, this stressor affects individuals and not populations of North Park phacelia based on the best available information (see Summary of Biological Status and Threats, below).

(8) Comment: One reviewer stated that the overall threat of oil and gas development is not thoroughly assessed in the draft SSA report. The reviewer commented that a geospatial analysis alone does not seem adequate to determine disturbance and dust associated with oil and gas wells that could be obtained by an on-the-ground evaluation.

Our response: We added more background information regarding the effects of dust and invasive plants to North Park phacelia, the potential for future development, and regulatory

mechanisms on Federal lands in the SSA report (Service 2023, pp. 19–24), and we summarize the oil and gas stressor in the proposed rule (see *Stressors,* below). However, we did not incorporate an on-the-ground evaluation of disturbance and dust or change our oil and gas development evaluation. Two oil and gas wells within 656 feet (ft) (200 meters (m)) of North Park phacelia populations were installed more than 40 years ago. These are no longer active (their well status is plugged and abandoned) and are causing no obvious disturbance based on the aerial imagery (Service 2023, pp. 22–23). Furthermore, while potential for oil and gas is high in Jackson County, Colorado, there are regulatory mechanisms on Federal lands for surveys and avoidance buffers as well as No Surface Occupancy (NSO) stipulations to protect North Park phacelia plants from mortality, disturbance, and dust (BLM 2016, p. 15; Service 2023, pp. 23–24). We expect these regulatory mechanisms to continue for the duration of the post delisting monitoring plan (we propose a 10-year monitoring period) after which the regulatory mechanisms for BLM sensitive species would apply to provide the same level of protection given to Federal Candidate species (BLM 2015b, pp. 3–76—3–77). The regulatory mechanisms afforded to BLM sensitive species should adequately protect the resiliency of North Park phacelia populations from stressors (OHV use, energy development, and livestock grazing) on BLM lands.

Aerial imagery has also been used to evaluate vegetation recovery on well pads in published reports (Nauman et al. 2017, entire), and our 656-ft (200-m) buffer is adequate to evaluate potential dust dispersal from well pads and other disturbed areas to North Park phacelia plants (Service 2023, pp. 19–21). Well pads serve as a potential source of fugitive dust generation over approximately two decades (up to 17 years) following installation (Nauman et al. 2017, pp. 9, 11). The two well pads may have been sources of fugitive dust in the past but are not likely current sources given their installation dates, their plugged and abandoned status, and the lack of obvious surface disturbance in aerial imagery. While an on-the-ground evaluation may be helpful to validate the aerial imagery, it would not provide additional quantitative information on potential dust effects to North Park phacelia plants unless an in-depth and lengthy evaluation of fugitive dust generation by the oil and gas wells compared to background levels is performed. An evaluation such as this would also likely only confirm our current available information on fugitive dust.

(9) Comment: One reviewer asked if agriculture could impact plants or pollinators through pesticide or herbicide use. A second reviewer felt that we should have included agricultural areas in our disturbance calculation for the ecological settings metric because agriculture results in habitat fragmentation, reduced pollinator habitat, and, if tilled, dust and pollution. The second reviewer recommended that we evaluate agricultural disturbance in appendix A.

Our response: We considered the reviewers' comments and discussed them with partners and experts on the species (Service 2022, p. 3). The primary agricultural practices near North Park phacelia populations are haying and grazing that generally use fewer pesticides than croplands and are not tilled. Haying and grazing practices likely do not result in direct impacts to North Park phacelia and one partner, CNHP, did not evaluate this stressor in their review of the species. North Park phacelia requires pollinators for maximum reproduction even though it can produce seeds without pollinators (Warren 1990, pp. 16–17; Service 2023, pp. 13–18). While we do not know the important pollinators of North Park phacelia, native bees in the following genera are frequent floral visitors: plasterer bees (*Colletes spp.*), small carpenter bees (*Ceratina spp.*), sweat bees (*Dialictus spp.*), and potter bees (*Anthidium spp.*) (Warren 1990, pp. 17–18). We have no information to indicate that haying and grazing practices are negatively impacting pollinators of North Park phacelia. Therefore, we declined to include an evaluation of agricultural disturbance in appendix A of the SSA report.

(10) Comment: One reviewer asked if factors such as dust and livestock trampling were missed in our evaluation and calculation of the ecological setting metric used to evaluate current condition in chapter 3.

Our response: We evaluated the potential impacts of disturbance and habitat loss, including the potential effects of dust, to North Park phacelia in our evaluation of the ecological setting metric and thresholds (Service 2023, pp. 27–28). We used the same 656-ft (200-m) evaluation buffer for the ecological setting metric as we did for the oil and gas evaluation discussed in comment number 8, above, which is adequate to evaluate potential dust dispersal from disturbance to North Park phacelia plants (Service 2023, pp. 19–21). We did not include livestock trampling as part of our calculation of this metric because the aerial imagery is too coarse to detect individual livestock tracks. Additionally, we are aware of no areas that have concentrated or extensive livestock use that would result in the loss of suitable or occupied habitat for North Park phacelia consistent with the disturbance types (roads, oil and gas wells, and developed areas) we included in our calculation of this metric. The best available information indicates that livestock grazing results in small, localized effects to individual plants and does not result in population-level effects to North Park phacelia (see *Stressors,* below). We also did not include agricultural areas in our calculation of this metric as discussed in comment number 9, above.

(11) Comment: One reviewer recommended that the SSA report state that more research is needed to better understand North Park phacelia and threats to its long-term survival and that we include research suggestions. The reviewer also expressed concern that off-highway vehicle (OHV) use has not been assessed recently in eight populations.

Our response: While we agree that more monitoring and research would result in a better understanding of the species and the magnitude and extent of possible impacts of OHV use and other stressors, it is beyond the scope of an SSA report to recommend research needs. Instead, we summarized the information available for North Park phacelia and the uncertainties regarding the species. While monitoring of some North Park phacelia populations may be infrequent, OHV use is a concern only in the North Park phacelia Airport population, not the other 11 populations. OHV use in the Airport population has been documented since the species was listed and we evaluate OHV use, below, see *Stressors.* We requested recent data for North Park phacelia to inform our 2021 5-year status review; however, we did not receive new information on OHV use and there is no requirement for additional research, including collecting data on OHV use and other threats.

We review the best scientific and commercial information available when conducting an SSA and making a status determination under the Act. In considering what factors might constitute a threat, we look beyond the mere exposure of the individuals of a species to the factor to determine whether the exposure causes actual impacts to the species. The mere identification of factors that could impact a species negatively is not

sufficient to compel a finding that listing (or maintaining a currently listed species) on the Federal lists of endangered or threatened wildlife and plants is appropriate. In determining whether a species meets the definition of a threatened or endangered species, we must evaluate all identified threats by considering the species' expected response and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level, as well as the cumulative effect of the threats. Based on the best available information, we recommended that North Park phacelia no longer meets the definition of an endangered species or a threatened species in our 2021 5-year status review, and we are proceeding with our recommendation to remove the species from the Federal List of Endangered and Threatened Plants in this proposed delisting rule.

(12) Comment: One reviewer asked how much unsurveyed potential habitat occurs on private lands. The reviewer recommended that we evaluate the risk of residential development to unsurveyed potential habitat on private lands based on how close these lands are to a municipality and current residential development, and their platting status.

Our response: We did not consider unsurveyed potential habitat in our review of the species' status and did not incorporate the reviewer's recommendation into the SSA report. Since the Act requires us to use the best available scientific and commercial information available, we must consider the range of the species as it is currently known. Therefore, we evaluated the residential development stressor to the species and its known occupied habitat, not the status of unsurveyed potential habitat.

(13) Comment: One reviewer stated that climate change may negatively affect pollinator abundance.

Our response: We considered the reviewer's statement and note they did not provide supporting information. We summarized available pollinator information for North Park phacelia in comment number 9, above. We are aware of the potential for climate change to disrupt plant-pollinator interactions if plant flowering and pollinator emergence become out of sync (Gérard et al. 2020, entire). We did not incorporate the comment into the SSA report because plant-pollinator disruption is not a current concern for North Park phacelia and we have no information to indicate that it is likely to occur in the future.

(14) Comment: One reviewer recommended adding another metric, pollinator abundance, to evaluate the current and future condition of North Park phacelia populations because research indicates that adequate pollination is important for species persistence and representation (Warren 1990, entire), climate change may affect pollinator abundance, and pollinators are not explicitly evaluated in the ecological setting metric.

Our response: We agree that pollinator abundance has the potential to influence the resiliency of populations; however, we do not have population abundance or trend information for any of the floral visitors identified in the Warren 1990 study. Best available scientific information indicates that North Park phacelia produces seeds regularly and pollinator-limitation is not a concern for the species. Therefore, we did not include a pollinator abundance metric in our current and future condition evaluation of North Park phacelia populations.

(15) Comment: One reviewer stated that we do not know the temperature requirement to break seed dormancy in North Park phacelia, and the annual mean temperature metric does not necessarily relate to temperatures required to break seed dormancy in the species based on an evaluation of climate information by BLM (Krening 2020, entire). The reviewer recommended that the annual mean temperature metric be considered a placeholder for modeling the impacts of temperature change and should be refined in future SSA revisions as our knowledge of germination requirements improves.

Our response: We reviewed the BLM report (Krening 2020, entire) and North Park phacelia is able to germinate over a range of cold temperatures. We did not incorporate the reviewer's recommendation into the SSA report to retain this metric. Instead, we removed the annual mean temperature metric from our evaluation of current and future condition in the SSA report because it was redundant to the other climate metric we retained in our analysis, the growing season water deficit (GSWD) metric, which is calculated using a combination of seasonal temperature and precipitation information.

(16) Comment: One reviewer recommended that we measure the distance between populations and evaluate the ability of known insect pollinators to travel these distances because low levels of connectivity were identified in Riser et al. (2019, entire).

Our response: We evaluated the distance between North Park phacelia populations that are more than 2 miles apart within the North Park and Larimer River basins. These distances may exceed the maximum flight distances (approximately 1.5 miles (mi) (2,500 m)) of the larger pollinators like bumblebees (*Bombus* sp.); however, bumblebees are able to cover large areas (up to 107 acres (ac) (44 hectares (ha)) in a few days (Hagen et al. 2011, p. 1). We would expect shorter flight distances and area coverage from smaller pollinators. We did not evaluate the ability of North Park phacelia's pollinators to travel between populations because the best available information already indicates that low levels of connectivity may be inherent to the species and low levels have persisted over the last 10,000 generations (approximately the last 5,000 years) (Naibauer and McGlaughlin 2022, entire). Therefore, we determined that the recommendation would not provide additional information about gene flow between North Park phacelia populations.

(17) Comment: One reviewer disagreed with the future condition scores for the population abundance and occupied habitat area metrics that remain the same as current condition under all future scenarios. The reviewer recommended that we change the scoring under future scenarios as was done in SSA reports for other Colorado plants (Rocky Mountain monkeyflower (*Mimulus gemmiparus*) and Skiff milkvetch (*Astragalus microcymbus*)) but did not recommend a particular score for these metrics. The reviewer also recommended that if we add a pollinator abundance metric to our evaluation, as discussed above in comment number 14, future condition scores should be different than current condition scores for that metric as well.

Our response: We considered the reviewer's recommendation but did not change the future condition scores for the population abundance and occupied habitat area metrics. As we mentioned in the SSA report, we are not able to reliably project direct future changes to these two metrics. We expect both metrics to change on an annual basis as they do currently in response to climate and demographic factors (Service 2023, pp. 25–30). Thus, we projected future changes to climatic factors, as measured by the GSWD metric, to assess the potential future change in plant abundance and occupied habitat area indirectly in our evaluation of future condition (Service 2023, pp. 36–47). We did not add a pollinator abundance metric to our evaluation as discussed in our response to comment number 14.

(18) Comment: One reviewer recommended that we include the BLM frequency data in our evaluation of current and future condition. The reviewer considers the BLM frequency data to be statistically robust and stated that the large, annual fluctuations in plant frequency very likely reduce the resilience of small North Park phacelia populations despite not knowing the underlying cause of the fluctuations.

Our response: We declined to include the BLM frequency data as a metric in our evaluation of current and future condition because these data are not available for all populations (Service 2023, p. 26). However, we incorporated the BLM data in the SSA Report when describing and evaluating the species' response to climate, demographic factors, and catastrophic events such as prolonged drought conditions.

(19) Comment: One reviewer recommended that we summarize the scope, hypotheses, and findings of two studies, Colorado Natural Areas Program (1994) and McCormick and Wu (1999), which we cite in the SSA report.

Our response: We summarized the findings of the two studies but declined to include more detail such as their scope and hypotheses in the SSA report, because they were not relevant to our analysis. The two studies are publicly available for those interested in the level of detail desired by the peer reviewer.

(20) Comment: We received conflicting comments from two peer reviewers on the following sentence in the draft SSA report: ''North Park phacelia needs to maintain all 11 populations in their current configuration and distribution to maintain viability.'' One reviewer agreed with the sentence, and another reviewer questioned its accuracy and recommended that we state that this is a hypothesis rather than a fact if there is no supporting information.

Our response: We considered the reviewers' comments and agreed with the reviewer who questioned the accuracy of the sentence because we do not have supporting information that indicates all 11 populations known at the time of the draft SSA report are needed for viability. We revised the sentence to be consistent with our analytical framework and best available information that North Park phacelia needs multiple, resilient populations distributed across its range to reduce risk associated with catastrophes such as severe, prolonged drought (redundancy) and longer-term environmental change (representation) (Service 2023, pp. 18–19).

(20) Comment: One reviewer considers the following sentence to be misleading because the BLM frequency data provides reliable and representative rangewide trend data for North Park phacelia in Jackson County: ''Reliable range-wide census data are not available to compare year-to-year abundance, or trend, because survey data were not collected every year nor at every occurrence.''

Our response: We removed the words, ''or trend'' in the sentence to partially address the comment in the SSA report. However, we consider the rest of the sentence to be accurate with respect to census data because we are not able to derive census data from the BLM frequency data. Furthermore, we agree with the reviewer that the trend information derived from the BLM frequency data applies only to those populations in the North Park basin, not to the populations in the Larimer River and Troublesome Creek basins.

(21) Comment: One reviewer stated that the conclusions of the SSA report were not clear and recommended that the information in appendix A be discussed in more detail or perhaps appendix A should be added to the body of the SSA report.

Our response: We added more detail and a summary of the information in appendix A to the SSA report to partially address the comment. However, we did not add appendix A to the body of the SSA report to maintain a consistent document format and for ease of reading. Appendix A is part of the SSA report, and there was no added benefit to moving the appendix to the body of the SSA report. All information in the SSA report was considered in making our determination of the species' status under the Act.

Previous Federal Actions

On September 2, 1980, we proposed to list the North Park phacelia as an endangered species due to its small, localized extent of one population and the threat of OHV use, specifically motorcycle use, as well as livestock trampling, potential energy development of coal and oil and gas, and the inadequacy of regulatory mechanisms (45 FR 58168–58171). We determined that it would not be prudent to designate critical habitat because of the concern of collection. A second population was identified in 1981 on BLM lands within a Known Recoverable Coal Resource Area that was partially leased for oil and natural gas and subject to livestock trampling. On September 1, 1982, we finalized the listing of North Park phacelia as an endangered species (47 FR 38540). The final rule included a determination that the designation of critical habitat for North Park phacelia was not prudent. In 1986, we published a final recovery plan for North Park phacelia (Service 1986, entire). In 2012, we published a 5-year status review that recommended the species remain an endangered species under the Act (Service 2012, entire).

On April 12, 2019, we published a notice of initiation of a 5-year review for the North Park phacelia in the **Federal Register** and requested information that could have a bearing on the status of North Park phacelia (86 FR 14965–14966). We completed the 5-year status review on August 30, 2021; this 5-year status review recommended that North Park phacelia be delisted since it does not meet the definition of an endangered species or a threatened species under the Act.

Background

A thorough review of the taxonomy, life history, and ecology of the North Park phacelia is presented in the SSA Report Version 1.1 (Service 2023, entire). Recent genetic work has updated the status and range of North Park phacelia since it was listed in 1982. In 2019, a genetic study using microsatellite markers identified that three populations of a closely related subspecies, Scully phacelia (*Phacelia formosula* var. *scullyi*), in adjacent Larimer County, Colorado, were actually North Park phacelia based on an evaluation of genetics, morphology, and ecology, grouping them with the North Park phacelia (*Phacelia formosula*) populations in Jackson County, Colorado (Riser et al. 2019, pp. 7–8). Most recently, in 2022, a genetic study using random site-associated DNA sequencing (RADseq) confirmed the Riser et al. (2019) findings that the three populations in Larimer County are North Park phacelia and determined that another population in Grand County, Colorado, is also North Park phacelia. This population in Grand County was formerly identified as Troublesome phacelia (*Phacelia ginaglenneae*) (Naibauer and McGlaughlin, 2022, entire). These genetic studies are summarized in the SSA report (Service 2023, pp. 3, 8).

North Park phacelia is an herbaceous, short-lived plant in the waterleaf family (*Hydrophyllaceae*) (Ackerfield 2022, p. 533; Service 2023, pp. 5–7). The species occurs in Jackson, Larimer, and Grand Counties, Colorado, at elevations ranging from 7,490 to 8,260 ft (2,282–2,517 m). North Park phacelia grows in sparsely vegetated, well-drained, barren soils of the Coalmont formation, Niobrara Shale, and clay and white shale of the Troublesome Creek

formation surrounded by sagebrush-dominated habitat (*Artemisia tridentata* var. *vaseyana* and *Artemisia nova*) (CNHP 2015a, p. 1; CNHP 2020 pp. 2–3; Service 2023, pp. 6–7).

North Park phacelia plants grow up to approximately 9 inches (in) (22 centimeters (cm)) tall, with one to many stems, and purple or violet flowers on flowering stalks (inflorescences) shaped like a coiled scorpion's tail (helicoid cyme) (Spackman et al. 1997; Ackerfield 2022, p. 533). Each fruit produces four small seeds (Atwood 2010, p. 1). North Park phacelia has four life stages: seeds, seedlings, rosettes, and reproductive adults. Plants live for 1 year (annual) or 2 years (biennial) with one reproductive event if they survive to adulthood. Flowering occurs from late spring through the summer (June through August) during the driest time of the year with June being the most significant transition time to flowering (McCormick and Wu 1999, p. 7). Successful reproduction to produce seeds likely depends on the temperature and moisture conditions of the spring and summer months of that year as well as favorable conditions during the prior year for seedling establishment and rosette survival (McCormick and Wu 1999, pp. 5, 8). The species is not known to reproduce asexually.

Measurable differences in plant morphology (size, leaves, and seeds) in plants and soil type occur across the range by county (and basin). Plants in Jackson and Larimer Counties (the North Park and Larimer River basins) generally have a life span of 2 years and occasionally 1 year. Plants in Grand County (the Troublesome Creek basin) generally have a life span of 1 year. These morphological, life history, and soil differences contributed to the previous taxonomic delineations mentioned above that are no longer applicable (Naibauer and McGlaughlin 2022, pp. 2, 5–7, 23). The Integrated Taxonomic Information System (ITIS) considers North Park phacelia to be a distinct species (ITIS 2023, entire).

Pollinators are likely needed to support maximum reproduction and genetic diversity of the species. Plants can produce seeds without pollinators by self-pollination, although this process results in lower fruit and seed production (Warren 1990, pp. iii, 16). While we do not know what the most important pollinators are for North Park phacelia, insect floral visitors include hover flies, wasps, and a variety of bees (Warren 1990, p. 44; Service 2023, pp. 13–14). Native bees in the following genera are frequent floral visitors: plasterer bees (*Colletes spp.*), small carpenter bees (*Ceratina spp.*), sweat bees (*Dialictus spp.*), and potter bees (*Anthidium spp.*) (Warren 1990, pp. 17–18).

Seeds are produced in the fall and likely require a period of cold stratification (cold temperatures and moist conditions) during the winter months to break dormancy before germinating the following spring or fall (Gamboa-deBuen and Orozco-Segovia 2008, entire). Specific germination requirements of North Park phacelia are not known but likely consist of some combination of appropriate temperature and moisture conditions (Krening 2020, p. 6).

We have incomplete information regarding the longevity of seeds in the seedbank. North Park phacelia seeds are known to remain viable within the soil for at least 1 to 2 years, and longer timeframes are likely but have not been evaluated (Krening 2020, p. 2; Krening and Dawson 2021, p. 5). Based on information for two other species in the *Phacelia* genus with similar life histories, the species likely maintains a persistent seedbank with seeds remaining viable for extended periods, anywhere from approximately 4 to 18 years (Langton 2015 pp. v, 1; Meyer 2018, p. 1; Service 2013, p. 1).

North Park phacelia disperses primarily over short distances through wind, water runoff, ants, and gravity (seeds roll downhill within the habitat). Given the species' expanded range, long-distance dispersal events likely occurred in the past. North Park phacelia's level of genetic diversity is low (using RADseq methods) to moderate (using microsatellite methods) (Naibauer and McGlaughlin 2022, pp. 16–18; Riser et al. 2019, p. 7). These differences in the amount of genetic diversity (moderate in one study versus low in another) are expected based on the different methodologies (Forester 2022, p. 1; Thurman 2022, p. 1). There is agreement by both studies on the differences in genetic structure of populations between the three basins (*i.e.,* at the county level), which are likely the result of isolation effects from the long distances and mountain ranges that separate them (Naibauer and McGlaughlin 2022, pp. 16–18; Riser et al. 2019, p. 7, Forester 2022, p. 2; Thurman 2022, p. 1; Service 2023, pp. 3, 8). These genetic differences are consistent with past taxonomic delineations of different species and subspecies in the three basins (see earlier discussion).

Preliminary genetic information indicates there is little to no recent or historical gene flow between populations over the last approximately 10,000 generations (5,000 to 10,000 years); however, there appears to be sufficient gene flow and genetic diversity within populations that inbreeding is not a concern (Naibauer and McGlaughlin 2022, entire; Service 2022, pp. 3, 8). A more robust sampling and genetic analysis of gene flow is needed to confirm or refute these results (Forester 2022, p. 1). Genetic variation occurs between populations, and the genetic differences increase with distance, indicating a pattern of isolation by distance (Naibauer and McGlaughlin 2022, pp. 3, 16–17, 25). Populations near each other are more alike genetically due to larger amounts of gene exchange relative to more distant populations (Naibauer and McGlaughlin 2022, pp. 3, 27–28). The genetic results indicate the species has a poor dispersal ability and there is little to no pollinator-mediated gene flow between populations.

North Park phacelia's current range in Colorado extends approximately 779 square miles (mi^2) (2,018 square kilometers (km^2)) from the Laramie River in northwestern Laramie County, across the Medicine Bow Mountain Range to North Park in Jackson County, and across the Rabbit Ears Mountain Range to Troublesome Creek in Grand County. The species is distributed in three basins (Laramie River, North Park, and Troublesome Creek), one basin per county, and each basin is separated by a mountain range. The North Park phacelia occurs on approximately 452 ac (183 ha) of occupied habitat, primarily on Federal lands that are managed by BLM and the Service and that comprise 81 percent of its occupied habitat. The remaining occupied habitat (19 percent) occurs on private lands, 5 percent of which is managed under a conservation easement specifically designed to protect North Park phacelia (Service 2023, pp. 10–11).

We do not know if the North Park phacelia was more broadly distributed historically. North Park phacelia's current range is much larger than was known at the time of listing due to the discovery of new populations in Jackson County and the taxonomic revisions of populations in Laramie and Grand Counties. At the time of Federal listing, there were only two known North Park phacelia populations with approximately 2,700 plants located in North Park (Jackson County), Colorado (47 FR 38540, September 1, 1982). As of 2023, there are 12 known populations with approximately 23,000 to 26,000 plants, an increase of more than 20,300 plants than we reported in our listing rule (47 FR 38540, September 1, 1982). The current population size is also an increase of more than 8,600 plants than

we reported in our 2021 5-year status review with the addition of the new population (Troublesome Creek Area of Critical Environmental Concern (ACEC)) in Grand County (Service 2023, pp. 3, 10–11).

Population trends for North Park phacelia are difficult to determine. The best available information includes periodic population estimates provided by the Colorado Natural Heritage Program (CNHP) and annual plant frequency monitoring (the presence or absence of the species within a monitoring grid of 1-m-by-1-m cells) conducted by BLM at five populations in North Park (Jackson County) over a 13-year period (2010 to 2022) (Krening and Dawson 2022, entire). The BLM frequency monitoring cannot be used to estimate population abundance, but it shows large amounts of annual variability attributed to climate and demographic variables with no clear trend over the 13-year period (Service 2023, pp. 25–26). The frequency monitoring also shows that North Park phacelia exhibits a strong response in some years to drought conditions, as seen in 2012 and 2020, with low to no above-ground plant abundance (Krening and Dawson 2022, entire). Following drought conditions, the species is resilient and plant abundance generally rebounds back to pre-drought levels in years with favorable precipitation.

Fluctuations in plant frequency are probably a response to drier conditions in conjunction with demography and perhaps the availability of other resources under various moisture conditions (Schwinning and Sala 2004, pp. 211–219). North Park phacelia and other short-lived plants have the potential to respond to climate conditions within a relatively short timeframe because of their short life span (Tielbörger et al. 2014, p. 2). They can employ adaptations to survive periods of resource limitation (*i.e.,* drought) and can respond strongly to available water (Alexander et al. 1994; p. 2004; Salguero-Gómez et al. 2012, p. 3100; Schwinning and Sala 2004, entire). Moreover, North Park phacelia's ability to respond quickly to precipitation levels is a response that is consistent and compatible with plant adaptations to survive semi-arid environments with periods of drought and is advantageous to avoid stressful conditions (Lesica and Crone 2007, p. 1367; Schwinning et al. 2004, entire; Schwinning and Sala 2004, entire; Verhulst et al. 2008, pp. 104–105). Based on the discovery of many new populations, the lack of extirpated populations, and the CNHP and BLM information, the distribution of the species appears to be currently stable.

Recovery Criteria

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the species. Under section 4(f)(1)(B)(ii), recovery plans must, to the maximum extent practicable, include objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of section 4 of the Act, that the species be removed from the Federal Lists of Endangered and Threatened Wildlife and Plants.

Recovery plans provide a roadmap for us and our partners on methods of enhancing conservation and minimizing threats to listed species, as well as measurable criteria against which to evaluate progress towards recovery and assess the species' likely future condition. However, they are not regulatory documents and do not substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. A decision to revise the status of a species or to delist a species is ultimately based on an analysis of the best scientific and commercial data available to determine whether a species is no longer an endangered species or a threatened species, regardless of whether that information differs from the recovery plan.

There are many paths to accomplishing recovery of a species, and recovery may be achieved without all of the criteria in a recovery plan being fully met. For example, one or more criteria may be exceeded while other criteria may not yet be accomplished. In that instance, we may determine that the threats are minimized sufficiently and that the species is robust enough that it no longer meets the definition of an endangered species or a threatened species. In other cases, we may discover new recovery opportunities after having finalized the recovery plan. Parties seeking to conserve the species may use these opportunities instead of methods identified in the recovery plan. Likewise, we may learn new information about the species after we finalize the recovery plan. The new information may change the extent to which existing criteria are appropriate for identifying recovery of the species. The recovery of a species is a dynamic process requiring adaptive management that may, or may not, follow all of the guidance provided in a recovery plan.

Here, we provide a summary of progress made toward achieving the recovery criteria for the North Park phacelia. More detailed information related to conservation efforts can be found below under Summary of Biological Status and Threats. We completed a final recovery plan for the North Park phacelia in 1986 (Service 1986, entire). The 1986 plan includes objective, measurable criteria for delisting; however, the plan has not been updated for more than 30 years, so some aspects of the plan may no longer reflect the best scientific information available for the North Park phacelia.

Below is the single delisting criterion described in the 1986 North Park phacelia recovery plan (Service 1986, p. 9) and the progress made to date in achieving the criterion.

Criterion for Delisting

North Park phacelia may be considered recovered when 15 occurrences with 500 mature flowering plants each are identified and secured.

Progress

Based on information through 2022, there are a total of 12 populations with approximately 23,000 to 26,000 plants. We consider populations to be synonymous with the criterion's use of the word ''occurrences,'' and the current number of populations (12) does not meet the recovery criterion (of 15 populations). While we do not know the number of *flowering* plants in each population, we do know the current total population of the species (23,000 to 26,000), which includes flowering and non-flowering plants, exceeds the total number of flowering plants identified by this criterion (7,500). We also know that 7 populations (Case Flats, Potter Creek, Rockwell; Verner and Brownlee; Diamond J State Wildlife Area; North Park Resource Natural Area ACEC; Forrester Creek; Hohnholz North East; and Troublesome Creek ACEC) have at least 500 plants, which includes both flowering and non-flowering plants.

Given what we now know about the species' annual fluctuations in frequency and strong drought response (see Background, above), we do not expect populations to meet the recovery criterion (of 500 flowering plants) every year and consider this metric to be insufficiently tailored to the species' demography (life-history characteristics). This metric (500 flowering plants) is not specific to North Park phacelia but is an application of the 50/500 rule, a generalized rule of

thumb to identify a minimum population size to avoid inbreeding depression (minimum of 50 breeding individuals) and maintain long-term genetic diversity for evolutionary potential (minimum of 500 breeding individuals) in an idealized population that is both small and isolated (Franklin and Frankham 1998, entire; Jamieson and Allendorf 2012, entire). Some researchers recommend that the metric of 500 breeding individuals should not be considered a prediction of extinction risk without further consideration of demography and gene flow (Jamieson and Allendorf 2012, pp. 580–583). Gene flow, even at very low levels, can maintain genetic diversity in populations with fewer than 500 breeding individuals, and lower genetic diversity is a poor predictor of extinction risk when threats such as habitat loss and demography are not taken into account (Swindell and Bouzat 2006, pp. 86–87; Palstra and Ruzzante 2008, pp. 3428, 3430, 3441–3443; Jamieson and Allendorf 2012, pp. 580–583). Recent work recommends an evaluation of many attributes, including but not limited to demography and levels of genetic diversity, to evaluate a species' adaptive capacity and vulnerability to changing conditions (Thurman et al. 2020, entire; Forester et al. 2023, entire).

The North Park phacelia populations occur primarily on Federal lands (81 percent of occupied habitat) with management plans in place to protect the species and its habitat, and we consider these populations to be secure. In addition, on private lands, The Nature Conservancy manages a conservation easement specifically designed to protect the species in perpetuity (5 percent of occupied habitat) (Byers 2023, entire); however, little to no protection exists on the remaining private lands (14 percent of occupied habitat). Despite the lack of protections on private lands for the North Park phacelia, no current or projected future population-level threats occur on these lands except for the Airport population (see *Stressors,* below). Thus, although not all populations are considered secure, we conclude that the intent of the criterion to ensure that sufficient populations were protected from threats into the future has been met for 11 of the 12 known populations. While the North Park phacelia's status does not meet the 1986 recovery criterion, we find that the species' populations are sufficiently resilient and that the smaller number of populations and lack of available information on flowering plant abundance within populations are no longer relevant given what we now know about the species.

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations in title 50 of the Code of Federal Regulations set forth the procedures for determining whether a species is an endangered species or a threatened species, issuing protective regulations for threatened species, and designating critical habitat for endangered and threatened species. In 2019, jointly with the National Marine Fisheries Service, the Service issued a final rule that revised the regulations in 50 CFR part 424 regarding how we add, remove, and reclassify endangered and threatened species and the criteria for designating listed species' critical habitat (84 FR 45020; August 27, 2019). On the same day, we issued a finalrule that revised 50 CFR 17.31 and 17.71 (84 FR 44753) and ended the ''blanket rule'' option for application of section 9 prohibitions to species newly listed as threatened after the effective date of those regulatory revisions (September 26, 2019).

Our analysis for this decision applied the regulations that are currently in effect, which include the 2019 revisions. However, we proposed further revisions to these regulations on June 22, 2023 (88 FR 40764). In case those revisions are finalized before we make a final status determination for this species, we have also undertaken an analysis of whether the decision would be different if we were to apply those proposed revisions. We concluded that the decision would have been the same if we had applied the proposed 2023 regulations. The analyses under both the regulations currently in effect and the regulations after incorporating the June 22, 2023, proposed revisions are included in our decision file.

The Act defines an ''endangered species'' as a species that is in danger of extinction throughout all or a significant portion of its range, and a ''threatened species'' as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether any species is an endangered species or a threatened species because of any of the following factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects. The determination to delist a species must be based on an analysis of the same five factors.

We use the term ''threat'' to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term ''threat'' includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term ''threat'' may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an ''endangered species'' or a ''threatened species.'' In determining whether a species meets either definition, we must evaluate all identified threats by considering the species' expected response and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species—such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an ''endangered species'' or a ''threatened species'' only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

The Act does not define the term ''foreseeable future,'' which appears in the statutory definition of ''threatened species.'' Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term

''foreseeable future'' extends only so far into the future as we can reasonably determine that both the future threats and the species' responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. ''Reliable'' does not mean ''certain''; it means sufficient to provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on it when making decisions.

It is not always possible or necessary to define the foreseeable future as a particular number of years. Analysis of the foreseeable future uses the best scientific and commercial data available and should consider the timeframes applicable to the relevant threats and to the species' likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species' biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

Analytical Framework

The SSA report documents the results of our comprehensive biological review of the best scientific and commercial data regarding the status of the species, including an assessment of the potential threats to the species. The SSA report does not represent our decision on whether the species should be proposed for delisting. However, it does provide the scientific basis that informs our regulatory decisions, which involve the further application of standards within the Act and its implementing regulations and policies.

To assess North Park phacelia's viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency is the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years); redundancy is the ability of the species to withstand catastrophic events (for example, droughts, large pollution events), and representation is the ability of the species to adapt to both near-term and long-term changes in its physical and biological environment (for example, climate conditions, pathogens). In general, species viability will increase with increases in resiliency, redundancy, and representation (Smith et al. 2018, p. 306). Using these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability.

The SSA process can be categorized into three sequential stages. During the first stage, we evaluated individual species' life-history needs. The next stage involved an assessment of the historical and current condition of the species' demographics and habitat characteristics, including an explanation of how the species arrived at its current condition. The final stage of the SSA involved making predictions about the species' responses to positive and negative environmental and anthropogenic influences. Throughout all of these stages, we used the best available information to characterize viability as the ability of a species to sustain populations in the wild over time which we then used to inform our regulatory decision.

The following is a summary of the key results and conclusions from the SSA report; the full SSA report can be found at Docket No. FWS–R6–ES–2023–0114 on *https://www.regulations.gov.*

Summary of Biological Status and Threats

In this discussion, we review the biological condition of the species and its resources, and the threats that influence the species' current and future conditions, in order to assess the species' overall viability and the risks to that viability. In addition, the SSA report (Service 2023, entire) documents our comprehensive biological status review for the species, including an assessment of the potential threats to the species.

The following is a summary of this status review and the best available information gathered since that time that has informed this decision.

Individual Needs

Individuals of North Park phacelia need certain habitat factors, including: well-drained sandstone, shale, or clay soils of the Niobrara, Coalmont, and Troublesome Creek formations; a montane, mid-elevation climate (elevations ranging between 7,490 to 8,260 ft (2,282 to 2,517 m) with approximately 12 in (31 cm) of rain and 63 in (1.6 m) of snow per year; a period of cold, moist conditions during the winter to break seed dormancy and facilitate germination in the spring or fall; moisture during the spring and summer (growing season) for successful germination, establishment and reproduction (seed production); and pollinators for maximum reproduction (Service 2023, pp. 14–16; U.S. Climate Data 2023, entire).

Population Needs

To be sufficiently resilient, populations require recruitment, survivorship, and reproduction at rates able to sustain populations, in addition to pollinator connectivity between individuals within populations. We consider population resiliency to be positively correlated with plant abundance (Service 2023, pp. 16–17). Sufficiently resilient populations also contain enough individuals across each life stage (seed, seedling, and mature reproductive adult) to bounce back after experiencing environmental stressors such as drought, livestock grazing, habitat disturbance, and demographic stochasticity (births, deaths, and reproductive events that fluctuate over time). While we do not know the level or amount of recruitment necessary for populations to be sufficiently resilient, we assume that North Park phacelia populations are most resilient when all four life stages are present.

Species Needs

The number of populations across the landscape influences the redundancy of North Park phacelia. More populations across the range increase the species' ability to withstand catastrophic events. Individuals and populations inhabiting diverse ecological settings and exhibiting genetic or phenological variation add to the level of representation across the species' range. The greater diversity observed in North Park phacelia genetics, habitats, and morphology, the more likely it is to be able to adapt to change over time. Thus, the species needs (1) a sufficient number and distribution of resilient populations to withstand catastrophic events (redundancy) and (2) a range of variation that allows the species to adapt to changing environmental conditions (representation) (Service 2023, pp. 18–19). The SSA report provides additional detail on the species' individual-, population-, and species-level needs (Service 2023, pp. 11–19).

Stressors

In the SSA report, we evaluated stressors and other actions that can positively or negatively affect North Park phacelia at the individual, population, or species levels, either currently or into the future (Service 2023, pp. 19–27). In this proposed rule, we will discuss only those factors in detail that could meaningfully impact the status of the species. Residential and urban development, off-highway vehicle

(OHV) use, mining and energy development, livestock grazing, invasive plants, and climate change are all factors that influence or could influence the species' viability (Service 2023, pp. 19–27). Those stressors that are not known to have effects on North Park phacelia populations, such as small mammal and insect herbivory, pesticides, and agriculture, are not discussed here but are evaluated in the SSA report (Service 2023, pp. 21, 27, appendix A).

Residential and Urban Development

Private lands account for approximately 19 percent of occupied habitat for North Park phacelia populations (Service 2023 tables 3 and 4, p. 11). Currently, without a Federal nexus (funds, permits, or approval), the species has little to no protection from residential and urban development on the majority of private lands (14 percent of occupied habitat overall) with the exception of a conservation easement that protects one population (Diamond J State Wildlife Area) comprising 5 percent of occupied habitat. The conservation easement is held by The Nature Conservancy and specifically addresses the management and protection of North Park phacelia in perpetuity (Byers 2023, entire).

We assessed the residential and urban development stressor to North Park phacelia based on our evaluation of disturbance in and near known populations. We also included utility corridors and roads in our evaluation of this stressor. A very low level of residential and urban development occurs in or near plant populations, and residential and urban development does not appear to result in any loss of habitat (Service 2023, appendix A). The current human population estimate for Jackson County is 1,363, with a negative growth rate (−2.2 percent) from 2010 to 2022 (U.S. Census Bureau 2022, entire). The Colorado State Demography Office forecasts that Jackson County's human population will continue to decrease through 2050 (Colorado Department of Local Affairs 2022, entire). The Laramie River Valley portion of Larimer County where North Park phacelia occurs does not contain a municipality, and we assumed that population growth in this area is similar to the projections for Jackson County. We did not perform this evaluation for Grand County because the one population (Troublesome Creek ACEC) occurs on Federal lands designated as a land use avoidance area where rights of way (ROW) grants would be avoided to the extent possible (BLM 2015a, pp. 52–53, 70).

We incorporated the current levels and effects of this stressor in our evaluation of current resiliency. However, given the projected future declines in the human population, we did not project any changes in this stressor in our evaluation of future resiliency (Service 2023, pp. 22, 37–38).

Off Highway Vehicle (OHV) Use

In the final listing rule (47 FR 38540, September 1, 1982), off highway vehicle (OHV) use, specifically motorcycle use, was identified as a primary threat to North Park phacelia in one of the two known populations at the time. Negative effects of OHV use include habitat degradation and plant mortality (Goeft and Alder 2001, entire; Brooks and Lair 2005, entire; White et al. 2006, entire).

We assessed the OHV use stressor to North Park phacelia based on our evaluation of overlap and effects to known populations. We also included other types of off highway recreation, such as mountain biking, hiking, and target shooting, in our evaluation of this stressor. Excessive OHV use continues to occur in the one population (Airport) where it was identified at the time of listing, and this stressor does not appear to have changed since listing (CNHP 2020, p. 1; Service 2023, pp. 26, 33). This location is readily accessible, and corrective actions such as boulder placement may have restricted use temporarily, but those deterrents have been removed and are no longer restricting recreational access and use. This is the only location where OHV use has a population-level effect to North Park phacelia. Low to occasional OHV use was documented in four other populations (Service 2023, appendix A) and currently is affecting only individual plants. OHV use is not permitted on Refuge lands (López, 2023, pp. 1–3) or the private land under conservation easement (Byers 2023, entire).

We incorporated the current levels and effects of this stressor in our evaluation of current resiliency. However, given the projected future declines in the human population, declines in recreational use since listing in four populations, and relatively stable OHV use in the Airport population, we did not project any changes in this stressor in our evaluation of future resiliency (Service 2023, p. 37).

Mining and Energy Development

In the final listing rule (47 FR 38540, September 1, 1982), coal or oil and gas exploration was identified as a potential threat to North Park phacelia in one of the two known populations at the time. Negative effects of mineral and energy development include habitat loss and degradation, plant mortality, reduced plant growth and reproduction, and potential introduction and spread of invasive weeds (Brock and Green 2003, entire).

We assessed the mineral and energy development stressor to North Park phacelia based on our evaluation of overlap and effects to known populations. The best available information indicates this stressor is not present in North Park phacelia populations and there has been no infrastructure development supporting coal, oil, and natural gas development resulting in the loss of plants or habitat (Service 2023, pp. 20–36).

Currently, there are no active coal mining operations or applications for coal mines in Jackson, Larimer, or Grand Counties (Colorado Division of Reclamation, Mining and Safety 2023a and b, entire). Coal is located in Jackson County, but future mining is not likely to occur due to transportation costs (BLM 2009, pp. 8, 14; BLM 2015b, 3–191, 3–194).

We evaluated the number of oil and gas wells in and associated habitat disturbance near North Park phacelia populations. Our evaluation in the SSA report identified two closed (plugged and abandoned) oil and gas wells within 656 ft (200 m) of North Park phacelia populations but no recent habitat disturbance associated with the wells (Service 2023, pp. 23–24). The potential for oil and gas is high within Jackson County, nonexistent in Larimer County, and low in Grand County (BLM 2009, pp. 22, 49, 50, 52; BLM 2015b, 3–190). There are three populations partially or wholly within existing oil and gas leases in Jackson County. We are not aware of any proposed energy development projects in or near North Park phacelia populations. Similar to coal development, oil and gas development in Jackson County is strongly constrained by transportation costs (BLM 2009, pp. 3–4). Future oil and gas development will be restricted in North Park phacelia habitat based on regulatory mechanisms for this stressor afforded to the species and BLM sensitive species on Federal lands as discussed below.

On Federal lands, BLM provides regulatory mechanisms to protect North Park phacelia from mining and energy development. BLM provides a controlled surface use (CSU) stipulation of a 328-ft (100-m) to 656-ft (200-m) avoidance buffer for North Park phacelia and other BLM sensitive plant species that would apply to energy development (coal mining and oil and gas extraction)

(BLM 2015a, pp. 24–26). BLM also provides a no surface occupancy (NSO) stipulation within Areas of Critical Environmental Concern (ACECs) and surveys and avoidance measures to protect North Park phacelia and other BLM sensitive species from plant and habitat loss associated with energy development (coal mining and oil and gas extraction) (BLM 2015a, pp. 64–65). On Refuge lands, most lands have been withdrawn from mining for coal and other locatable minerals. BLM is responsible for mineral management on Refuge lands that have not been withdrawn as well as oil and gas leasing and development; in those cases, BLM stipulations, surveys, and avoidance measures would also apply to Refuge lands (Service 2016, pp. 5–6). The BLM avoidance buffers minimize the potential for measurable, negative effects to North Park phacelia based on our literature review and evaluation for other rare, endemic plants growing in poorly developed or low-fertility soils (Service 2021b, chapter 7 and appendix E). Ten populations occur on lands where BLM regulations apply.

We incorporated the current levels and effects of this stressor in our evaluation of current resiliency. However, given the Federal regulatory mechanisms and lack of current mining and energy development or proposed projects in or near North Park phacelia populations, we did not project any changes in this stressor in our evaluation of future resiliency (Service 2023, pp. 24–25, 37).

Livestock Grazing

In the final listing rule (47 FR 38540, September 1, 1982), livestock grazing was identified as a threat to North Park phacelia in the two known populations at the time. Negative effects of livestock grazing include habitat degradation through the drying or compaction of soils, plant mortality or damage from trampling resulting in reduced individual survival, growth and reproduction, potential introduction and spread of invasive weeds, and the consumption of floral resources for pollinators (Fleischner 1994, entire; Lovich and Bainbridge 1999, entire; Mustajarvi et al. 2001, entire; Reisner et al. 2013, entire).

We assessed the livestock grazing stressor to North Park phacelia based on reporting by the CNHP and agricultural statistics of livestock inventories in the three counties over time. Some populations show evidence of livestock use but no indication of plant damage or mortality (CNHP 2020, entire). On BLM lands, livestock grazing is managed during July and August in North Park phacelia habitat to allow plants to flower and set seed (BLM 2015a, p. H–2). On Refuge lands, livestock grazing is not permitted in North Park phacelia habitat (López, 2023, pp. 1–3). The best available information indicates this stressor is currently affecting only individual plants and is not having a population-level effect to North Park phacelia. Agricultural statistics on livestock totals in the three counties over a 20-year period (1997 to 2017) indicate an approximately 50 percent drop in livestock numbers in Jackson County (28,748 to 14,207) with relatively stable numbers in Larimer and Grand Counties (U.S. Department of Agriculture 2023, entire).

We did not incorporate the current levels and effects of livestock grazing in our evaluation of current and future resiliency because this stressor is not having a population-level effect to North Park phacelia. We do not expect grazing management to change on Refuge lands and on BLM lands under the current BLM resource management plan (RMP) (see *Conservation Efforts and Regulatory Mechanisms,* below; Service 2023, pp. 22–23). Given the stability and decline in livestock totals per county discussed above, we do not expect livestock grazing to increase in North Park phacelia habitat in the future.

Invasive Plants

Invasive plants were not identified as a threat to North Park phacelia at the time of listing or in the 2012 status review (Service 2012, entire). Russian thistle (*Salsola tragus*), other thistles (*Cirsium* spp.), and cheatgrass (*Bromus tectorum*) are present in a few populations and appear to be associated with disturbance from development, OHV use, and livestock grazing (Service 2012, pp. 8, 11; CHNP 2020, pp. 9, 14, 47; Service 2022, p. 3). The Refuge is addressing this stressor by removing invasive thistle by hand (Service 2022, p. 3). The best available information indicates this stressor is currently affecting only individual plants and is not having a population-level effect to North Park phacelia.

We considered the effects of invasive plants to population resilience as part of our disturbance evaluation because this stressor is associated with development, roads, and other surface disturbance (Service 2023, pp. 20–23).

Climate Change

Climate change may affect the long-term survival of native species, including North Park phacelia, especially if longer or more frequent droughts occur. Within the range of North Park phacelia, under lower emission scenarios, summer maximum temperature is expected to increase 4.7 °F (2.6 °C), and under higher emission scenarios, summer maximum temperature is expected to increase 6.6 °F (3.7 °C) by mid-century, compared to the historical average between 1971 and 2010 (Hegewisch and Abatzoglou 2023, entire). Extreme droughts, like those that occurred in 2012 and 2020, could also become more frequent by mid-century. Historically (1979 to 2000), droughts of this scale did not occur within the range of the species (Service 2023, appendix B). Under lower emissions scenarios, these extreme droughts could occur four times between now and mid-century or, under higher emissions scenarios, five times between now and mid-century (Service 2023, appendix B).

North Park phacelia appears to respond strongly and quickly to climate conditions with peak years and trough years of plant frequency, although some uncertainty exists about the climate variables to which the species is responding. Growing season (spring and summer) precipitation appears to be important for plant survival and reproduction; however, seedling recruitment and plant frequency are not strongly correlated with precipitation and temperature (Krening and Dawson 2021, p. 4; Service 2023, p. 24). In some of the populations, there is a 3-to-5-year cycle of plant abundance fluctuations (peak to trough years), which appears to be influenced by climate conditions and demography (Krening and Dawson 2021, p. 4). Two trough years (2012, 2020) with lower plant frequency likely reflect the extreme drought conditions during the growing season. The drought conditions of these 2 years, as measured by the growing season water deficit (GSWD), was approximately 27 in (68.6 cm). Another trough year (2016) occurred in a year with average growing season precipitation and cannot be attributed to drought. Rather, the working hypothesis is that the 2016 trough year was potentially influenced by demographic factors. One limitation is the lack of population-level climate data; there is only one weather station in Jackson County that provides climate information for the entire species' range. Rainfall is highly localized across the range of the species and may vary across short distances and among the populations in Jackson County (Timberman, pers. comm. 2022).

As we mentioned above, growing season precipitation appears to be important for plant survival and reproduction and appears to influence the variation in annual plant frequency.

We evaluated historical and current growing season precipitation conditions with the GSWD metric, a measure of the difference between potential evapotranspiration (water loss by evaporation and transpiration by plants) and precipitation during the growing season. We consider the GSWD metric to be a proxy for plant stress, with higher GSWD values indicating drier conditions and greater plant stress during the growing season. Other climate factors likely play a role in annual frequency variation, but we do not fully understand these relationships. We compared the average GSWD for the historical time period (1971–2000) to the current time period (2011–2022). The historical time period is slightly wetter (lower average GSWD) compared to the current time period. The historical (1979–2000) average GSWD was 21.96 in (55.78 cm) and varied annually between a low of 15 in (38 cm) to a high of 26 in (66 cm) (Service 2023, p. 30, appendix C). Half of the historical time period (11 years) had near-average GSWD conditions (within one-half standard deviation of the average), with 4 wet years and 4 drought years. The current (2011–2022) average GSWD was 23.15 in (58.8 cm), a near-average historical GSWD value. As mentioned above, based on our evaluation of the BLM frequency monitoring, a GSWD of 27 in (68.6 cm) may be a significant drought threshold where North Park phacelia primarily remains dormant in the seedbank.

Given North Park phacelia's strong response to climate conditions, we carried forward this stressor in our analysis in the SSA report to examine the species' potential response to future changes in this stressor. We relied on the historical average GSWD as the baseline to compare current and projected future climate conditions.

We note that, by using the SSA framework to guide our analysis of the scientific information documented in the SSA report, we have analyzed the cumulative effects of identified threats and conservation actions on the species. To assess the current and future condition of the species, we evaluate the effects of all the relevant factors that may be influencing the species, including threats and conservation efforts. Because the SSA framework considers not just the presence of the factors, but to what degree they collectively influence risk to the entire species, our assessment integrates the cumulative effects of the factors and replaces a standalone cumulative-effects analysis.

Current Condition

In our SSA report, we evaluate current condition by examining current levels of resiliency in the 12 North Park phacelia populations and implications for redundancy and representation. Here, we summarize our evaluation of the current condition for resiliency, redundancy, and representation. Additional detail regarding our analysis is provided in the SSA report (Service 2023, pp. 20–36).

Resiliency

We describe the resiliency for each of the 12 populations in terms of the habitat and demographic factors needed by North Park phacelia (Service 2023, pp. 14–20, 27–35). We developed a categorical model to calibrate resiliency for the range of habitat and demographic conditions in each population. We first identified resource or demographic factors that contribute to the species' resiliency; these factors align with the individual resource needs and population-level needs we identified in the SSA analysis. We then defined threshold values for each identified resource or demographic factor that represent high, moderate, or low levels of that factor. Finally, we evaluated whether the current levels of each resource or demographic factor in a population fall within the predetermined thresholds for a high, moderate, or low score for the category; we then averaged these scores for each category to develop an overall current resiliency score for each population.

For North Park phacelia, our categorical model assessed the resiliency of each population by evaluating (1) the size of the occupied habitat area; (2) the ecological setting, a proxy for habitat condition that quantifies disturbance levels and evaluates a number of stressors including residential and urban development, OHV use, mineral and energy development, and invasive species cover; (3) population abundance; and (4) growing season water deficit (GSWD), a proxy for drought and soil moisture that approximates the availability of water during the spring and summer. We selected these habitat and demographic factors based on their importance to the species' resiliency and because we could evaluate them relatively consistently across all 12 populations.

Resiliency categories, thresholds, and scores were established based on the best available information and professional opinion of species experts. Occupied habitat areas are estimates based on expert opinion by CNHP and BLM using aerial imagery or field observations. Ecological setting and disturbance levels are based on a spatial analysis with conservative thresholds to compensate for the lack of detailed species-specific information and monitoring. Population abundance information is based on estimates by CNHP using field observations. GSWD, the difference between potential evapotranspiration and precipitation during the growing season, is based on climate data provided by the North Central Climate Adaptation Science Center and the Cooperative Institute for Research in Environmental Sciences.

There are 12 North Park phacelia populations, and according to our current condition analysis in the SSA report, half of them (6) have high resiliency, 5 have moderate resiliency and 1 has low resiliency (see table 1, below; Service 2023, p. 30). The 11 populations with high and moderate resiliency maintained adequate ecological setting conditions with low levels of disturbance, moderate or high population abundance, and a range of scores for occupied habitat areas. The 11 populations with high or moderate resiliency are distributed across the species' range (present in all three basins) (table 1). Of these, 6 populations have thousands of plants, the largest is estimated to have more than 8,600 plants, and these large populations are also distributed across the species' range (present in all three basins) (table 1). The Airport population in the North Park basin has a low resiliency score due to its low scores for occupied habitat area, population abundance, and ecological setting. This population has higher levels of disturbance from OHV use, and a road and parking lot surround this population, fragmenting the habitat. All 12 populations received a high score for GSWD because the current average (2011 to 2022) is similar to the historical average (1979 to 2000) for this metric. The 11 populations with high or moderate resiliency are at less risk from potential stochastic events, such as climatic variation, than the population with low resiliency.

TABLE 1—CURRENT CONDITION RESILIENCY RANKINGS FOR NORTH PARK PHACELIA POPULATIONS

Basin (county)	Population	Plant abundance	Population resiliency
North Park (Jackson)	North Park Resource Natural Area ACEC	1,200–3,000	High.
	California Gulch	200–350	Moderate.
	Airport	200	Low.
	Case Flats, Potter Creek, Rockwell	6,000	High.
	Verner and Brownlee	>2,000	High.
	Diamond J Ranch	300	High.
	Diamond J State Wildlife Area	2,000	High.
	Battleship–Dwinell Ranch	50–400	Moderate.
Larimer River (Larimer)	Hohnholz North East	375–800	High.
	Laramie River–Bull Mountain	300	Moderate.
	Forrester Creek	2,000	Moderate.
Troublesome Creek (Grand)	Troublesome Creek ACEC	8,675	Moderate.

Redundancy

Redundancy describes the number and distribution of populations, and the greater the number and the wider the distribution of the populations, the better North Park phacelia can withstand catastrophic events. The plausibility of catastrophic events also influences species' redundancy; if catastrophic events are unlikely within the range of the species, catastrophic risk is inherently lower. We identified severe and prolonged drought conditions as a plausible catastrophic event that may affect one or more populations simultaneously.

Redundancy for narrow endemic species is intrinsically limited; however, North Park phacelia populations are distributed across 3 basins (separated by 2 mountain ranges and approximately 20 mi (30 km) and 45 mi (72km)) in 12 populations within the range of the species. Within each basin, populations are separated by at least 1 mile (1.6 km). As we mentioned above, the 11 populations with high or moderate resiliency are distributed across the species' range (present in all 3 basins), and the 6 large populations with thousands of plants are also distributed across the species' range (present in all 3 basins). Thus, the 11 higher resiliency populations and their distribution help spread the risk of catastrophic drought conditions over a larger geographic area and contribute to the species' ability to withstand catastrophic events. We are not aware of any verified populations that have been extirpated (Service 2023, pp. 8–9). Redundancy has increased since North Park phacelia was listed because of our better understanding of the species, including more known populations, and a broader known distribution.

Representation

North Park phacelia exhibits some ecological and morphological variability between the three basins (see Background, above). The species has low to moderate genetic diversity and inbreeding is not a concern (Naibauer and McGlaughlin 2022, pp. 2–3, 25). Genetic variation occurs between populations, and the genetic differences increase with distance. Connectivity between nearby North Park phacelia populations appears to be low currently and historically (Naibauer and McGlaughlin 2022, pp. 3, 25). Six genetic management units were identified for the species, four in North Park basin, and one each in the Larimer River and Troublesome Creek basins (Naibauer and McGlaughlin 2022, pp. 27–28). Representation has increased since North Park phacelia was listed because taxonomic studies have led to the inclusion of additional populations previously considered different species and subspecies that contain more genetic variation (see Background, above).

Future Scenarios and Future Condition

In our SSA report, we forecasted the resiliency of North Park phacelia populations and the redundancy and representation of the species to mid-century (2050) using a range of four plausible future scenarios that capture the range of plausible climate conditions of the four different climate models and emissions scenarios (Bamzai-Dodson and Rangwala 2019, p. 15; Rangwala et al. 2021, pp. 4–5). We selected this timeframe because it encompasses approximately 15 generations of North Park phacelia and allows us to reliably project changes in the species' stressors, land management (*i.e.,* this timeframe encompasses at least the duration (30 years) of the applicable BLM resource management plan), and the species' response to stressors. While climate projections are available beyond 2050, there is a high degree of uncertainty in the species response to future climate conditions because information about North Park phacelia's physiological and genetic responses that may confer tolerance and adaptive capacity are unknown, and the potential exists for seedbank persistence under longer or more frequent drought conditions.

We developed four future scenarios using four plausible climate models that were downscaled to the range of North Park phacelia. By developing a range of plausible future scenarios, we assume that actual future conditions will likely fall somewhere between these four scenarios. Detailed descriptions of each scenario are available in the SSA report (Service 2023, pp. 36–47). Future climate conditions were the only differences among the four scenarios to capture the range of possible drought conditions (using the GSWD metric) to assess how well future climate conditions meet the needs of the species. Based on the best available information, our future scenarios included the assumption that the other stressors will not change in the future. Many of the stressors that affect North Park phacelia at the individual level currently do not influence population resiliency and are not expected to change in the future, so we did not change their extent or severity in our future scenarios. We initially considered increasing the amount of disturbance by as much as 10 percent in all populations, but the outcome did not change the future conditions of populations. Given the strong fluctuations in population abundance, we could not reliably project changes to the future population abundance metric directly. Instead, we relied on the future projections of the GSWD metric to evaluate future climate conditions and provide an indirect assessment of the population abundance. We generally expect population abundance to increase in years with average or near-average GSWD and decline in years with below-average GSWD, consistent

with the thresholds we identified for this metric.

In Scenario 1 (Warm and Wet), we project the resiliency of each population and the species' redundancy and representation will remain the same as the current condition (table 2). The average GSWD is projected to increase slightly compared to the historical average (by 0.96 in (2.4 cm)) but remains in the high-condition category for the GSWD metric. These slightly drier conditions would have minimal impact to populations because they are well within the range of variability that the species experienced historically. Between now and mid-century, the climate model projects only 1 year of GSWD above 27 in (68.6 cm; drought conditions associated with low plant frequency), which is less frequent than we have seen during the current condition time period (2011 to 2022). North Park phacelia is projected to maintain 11 populations with high or moderate resiliency in this scenario, and these populations are at less risk from potential stochastic events, such as climatic variation, than the population with low resiliency.

In Scenario 2 (Hot and Wet), we project the resiliency of nine populations will remain the same as the current condition, and three populations (Diamond J Ranch, Hohnholz North East, and Diamond J State Wildlife Area) will drop from high to moderate overall resiliency (table 2). Redundancy and representation remain relatively unchanged from the current condition. The average GSWD is projected to increase compared to the historical average (by 2.26 in (5.74 cm)), which results in the moderate-condition category for the GSWD metric. Between now and mid-century, the climate model projects 6 years of GSWD above 27 in (68.58 cm; drought conditions associated with low plant frequency), 2 of which were consecutive years, which is more frequent than seen during the current condition time period (2011 to 2022). The increase in water deficit as compared to historical conditions under this scenario (meaning that less water would be available to the plants) has the potential to negatively impact plant abundance. We expect the seedbank to remain viable under this projection and to support population resiliency. Despite some reduction in resiliency, North Park phacelia is projected to maintain 11 populations with high or moderate resiliency under this scenario, and these populations are at less risk from potential stochastic events, such as climatic variation, than the population with low resiliency.

In Scenario 3 (Very Hot and Very Wet), the resiliency of each population and the species' redundancy and representation are projected to remain the same as the current condition (table 2). The average GSWD is projected to increase slightly compared to the historical average (by 0.70 in (1.78 cm)) but remains in the high-condition category for the GSWD metric. These slightly drier conditions would have minimal impact to populations because they are well within the range of variability that the species experienced historically. Between now and mid-century, the climate model projects no years of GSWD above 27 in (68.58 cm; drought conditions associated with low plant frequency), which is less frequent than seen during the current condition time period (2011 to 2022). North Park phacelia is projected to maintain 11 populations with high or moderate resiliency under this scenario, and these populations are at less risk from potential stochastic events, such as climatic variation, than the population with low resiliency.

In Scenario 4 (Very Hot and Dry), we project the resiliency of nine populations will remain the same as current conditions, and three populations (Diamond J Ranch, Hohnholz North East, and Diamond J State Wildlife Area) will drop from high to moderate overall resiliency (table 2). Redundancy and representation remain relatively unchanged from the current condition. The average GSWD is projected to increase compared to the historical average (by 2.72 in (6.91 cm)), which results in the moderate-condition category for the GSWD metric. Between now and mid-century, the climate model projects 9 years of GSWD above 27 in (68.58 cm; drought conditions associated with low plant frequency), with 2 consecutive years and 3 consecutive years, which is more frequent than seen during the current condition time period (2011 to 2022). The increase in water deficit as compared to historical conditions under this scenario (meaning that less water would be available to the plants) has the potential to negatively impact plant abundance. We expect the seedbank to remain viable under this projection and to support population resiliency. Despite some reduction in resiliency, North Park phacelia is projected to maintain 11 populations with high or moderate resiliency, and these populations will be at less risk from potential stochastic events, such as climatic variation, than the population with low resiliency.

TABLE 2—SUMMARY OF NORTH PARK PHACELIA RESILIENCY FOR THE CURRENT CONDITION AND FOUR FUTURE SCENARIOS

Basin (county)	Population	Resiliency				
		Current condition	Future scenario 1	Future scenario 2	Future scenario 3	Future scenario 4
North Park (Jackson)	North Park Resource Natural Area ACEC.	High	High	High	High	High.
	California Gulch	Moderate	Moderate	Moderate	Moderate	Moderate.
	Airport	Low	Low	Low	Low	Low.
	Case Flats, Potter Creek, Rockwell.	High	High	High	High	High.
	Verner and Brownlee	High	High	High	High	High.
	Diamond J Ranch	High	High	Moderate	High	Moderate.
	Diamond J State Wildlife Area	High	High	Moderate	High	Moderate.
	Battleship–Dwinnell Ranch	Moderate	Moderate	Moderate	Moderate	Moderate.
Larimer River (Larimer)	Hohnholz North East	High	High	Moderate	High	Moderate.
	Laramie River–Bull Mountain	Moderate	Moderate	Moderate	Moderate	Moderate.
	Forrester Creek	Moderate	Moderate	Moderate	Moderate	Moderate.
Troublesome Creek (Grand)	Troublesome Creek ACEC	Moderate	Moderate	Moderate	Moderate	Moderate.

Under all four future scenarios, we project that redundancy and representation of North Park phacelia will remain similar to the current condition. The Airport population is projected to maintain its low current condition, and we do not anticipate it will become extirpated. Under the drier scenarios (Scenario 2 and 4), some genetic and morphological diversity within populations could be lost. However, even in the most pessimistic plausible scenario (Scenario 4), all populations are expected to remain extant and ecological, morphological, and genetic variation will continue to be represented by the 12 populations across North Park phacelia's range.

To summarize, we reviewed the current and future viability of North Park phacelia in the 2021 5-year status review and SSA report using the three conservation biology principles of resiliency, redundancy, and representation (see *Analytical Framework,* Service 2021a and 2023, entire; Shaffer and Stein 2000, pp. 306–310). We recommended in the 2021 5-year status review that threats to the species had been sufficiently ameliorated or had not materialized and that listing was no longer warranted. We received new genetics information identifying a new population of North Park phacelia after publication of the 2021 5-year status review that we added to the SSA report.

We evaluated North Park phacelia's resiliency based on the range of habitat and demographic conditions in each population (see *Analytical Framework,* below). Distributed across the species' range (*i.e.,* in all 3 basins), 11 populations have high or moderate resiliency, contributing to the species' ability to withstand stochastic or catastrophic events. Of these, 6 populations have thousands of plants; the largest is estimated to have more than 8,600 plants. These large populations are also distributed across the species' range (present in all three basins) and contribute to the species' overall low risk of extinction. No significant imminent stressors are acting on the species, and drought is the only stressor projected to increase in the future. Given the species' drought tolerance and likely ability to withstand future drought conditions, we project that 11 populations of North Park phacelia will remain in high or moderate resiliency with a low risk of extinction from stochastic or catastrophic events. The species has inherently low to moderate levels of genetic diversity with no apparent change from historical conditions. Ecological and morphological diversity across the range also contribute to North Park phacelia's adaptive capacity (representation) and its ability to respond to changes in the environment. Furthermore, the documented new populations and greater distribution of the species since it was listed in 1982 provide additional resiliency, redundancy, and representation across its range, which has increased our understanding of the viability of the species.

Conservation Efforts and Regulatory Mechanisms

Positive actions, in the form of conservation efforts such as land protections and regulations, have reduced sources of habitat degradation, and multiple agencies are committed to the conservation and preservation of North Park phacelia. BLM and the Service manage approximately 81 percent of the species' occupied habitat (Service 2023, tables 3 and 4, p. 11). The State of Colorado funds and The Nature Conservancy manages a conservation easement on approximately 5 percent of the species' occupied habitat on private land, specifically to protect North Park phacelia and other wildlife (Service 2023, table 4, pp. 11, 25). The remaining habitat (14 percent) is privately owned, with no protections afforded to the species (Service 2023, table 4, pp. 11, 25).

The range of North Park phacelia spans one BLM field office (Kremmling Field Office) and one planning area. The Kremmling Field Office has included conservation measures in their resource management plan to minimize adverse impacts of land use to listed and sensitive species, including the North Park phacelia (BLM 2015a, pp. 24–26, 65, 70, H–2). For example, the BLM resource management plan (RMP) includes motorized recreation restrictions, energy development restrictions, and grazing management; provisions for scientific research to aid in better understanding the effects of stressors on the species and guide conservation efforts; and collection prohibitions for rare plants that benefit North Park phacelia (BLM 2015a, pp. 2–3, 25, 68, H–2).

Six populations, with approximately 243 ac (98 ha) of occupied habitat (representing 54 percent of total occupied habitat), are partially or completely within BLM Areas of Critical Environmental Concern (ACECs), which total approximately 7,225 ac (2,924 ha) (BLM 2015a, pp. 24, 70; Service 2023, p. 23). The three ACECs (North Park Natural Area, Laramie River, and Troublesome Creek) were created in 2015 for the conservation of natural resources including North Park phacelia. The three ACECs are managed as land use authorization avoidance areas where land use authorizations such as rights of way (ROW) grants would be avoided to the extent possible (BLM 2015a, pp. 52–53, 70). The protections provided by ACEC designations are not contingent upon the species' federally listed status, and ACECs help to facilitate the maintenance and recovery of North Park phacelia, because they are areas where the species is not likely to be disturbed or adversely altered by land-use actions such as coal and oil and gas leasing and development (BLM 2015a, pp. 56, 64, 67, 68).

BLM's ACECs do not have an expiration date, and removing an ACEC designation is not simple. A withdrawal of an ACEC can be made only by the Secretary of the Interior (43 U.S.C. 1714). Two ACECs (North Park Natural Area and Laramie River) were designated to protect North Park phacelia, while one ACEC (Troublesome Creek) was designated to protect multiple species and resources in addition to the North Park phacelia (BLM 2015a, p. 70). The ACEC designations will not change under the current BLM RMP, even if North Park phacelia is delisted.

North Park phacelia also occurs on the Arapaho National Wildlife Refuge (Refuge) managed by the Service. The Refuge is closed to OHV use and livestock grazing where North Park phacelia occurs, and the Refuge's Comprehensive Conservation Plan (CCP) includes general management goals in support of North Park phacelia on Refuge lands and the implementation of conservation measures such as fences and minimizing disturbance, as needed, to ensure the species' survival and recovery (Service 2004, pp. 53, 68; Service 2023, p. 24). Other than occasional manual weed control efforts, we are not aware that the Refuge has performed other special management actions for North Park phacelia (López, 2023, pp. 2–3).

The current condition of North Park phacelia provides insight into the effectiveness of Federal management and, in general, the low levels of stressors on Federal and private lands; all but one (Airport) of the populations have high or moderate resiliency, including moderate to high habitat conditions (Service 2023, pp. 30–35). The species' current condition demonstrates that, both due to the species' population resiliency and to Federal management and other land protections, the stressors are not

currently meaningfully affecting the species.

Even without the protections of the Act, North Park phacelia would remain a BLM sensitive species for at least 5 years (BLM 2008, pp. 36, 47). If the species is no longer on the Federal List of Endangered and Threatened Plants or BLM's sensitive species list, the measures specific to listed and sensitive species in the BLM RMPs would no longer apply (*e.g.,* buffers around oil and gas development). However, most stipulations and conservation measures in these RMPs are not unique to North Park phacelia but rather provide general guidance for effective land management and rangeland health. For example, the motorized recreation restrictions mentioned above apply to most BLM lands and are not specific to North Park phacelia habitat. Additionally, the three ACECs discussed above are much larger than the North Park phacelia populations they contain, and they provide land use avoidance designations to the larger, surrounding habitats. If in the future North Park phacelia undergoes a downward trend and its viability is at risk such that it would again meet the definition of a BLM sensitive species, BLM has the authority to designate it as a BLM sensitive species (BLM 2008, pp. 36–37).

Even without the protections of the Act, the Refuge would continue to provide management goals and protections to North Park phacelia under their current CCP (Service 2004, pp. 53, 68). Given the 15-year timeframe of CCPs, protections outlined in the Arapaho Refuge CCP are expected to remain in place for at least the next few years until the next revision (López, 2023, pp. 2–3). The likelihood of future CCP revisions including conservation of North Park phacelia is high because the National Wildlife Refuge System Improvement Act (Pub. L. 105–57) mandates conservation of fish, wildlife, and plants and their habitats within the Refuge system. If the management goals for North Park phacelia are removed in a later version of the CCP, the general land use management and habitat protections would likely remain to provide indirect benefits to the species, including prohibitions on stressors such as OHV use and livestock grazing (López, 2023, pp. 2–3).

Even without the protections of the Act, the conservation easement on private lands where North Park phacelia occurs will be maintained in perpetuity regardless of the species' Federal status (Byers 2023, entire). The Nature Conservancy monitors the property for compliance annually, and the landowner administers a land management plan to benefit the species (Byers 2023, entire).

The State of Colorado has no laws protecting rare plant species. The State of Colorado does identify North Park phacelia as a plant species of greatest conservation need in their 2015 Colorado State Wildlife Action Plan (SWAP) Rare Plant SWAP Addendum (CNHP 2015b, A–13, A–67, A–154, A–203). The SWAP informs the State of Colorado of conservation priorities but is not a regulatory mechanism and does not provide funding or management authority for North Park phacelia.

In summary, conservation efforts and regulatory mechanisms (such as a conservation easement and Federal RMPs and CCPs) have ameliorated, or are continuing to minimize, the previously identified threats of recreation (OHV use), livestock grazing, and energy development to North Park phacelia. As indicated above, the majority of these mechanisms will likely remain in place regardless of the species' Federal listing status. Consequently, we find that conservation efforts and existing regulatory mechanisms are adequate to address previously identified threats and the stressors we evaluated in the SSA report and in this proposed rule.

Proposed Determination of North Park Phacelia (Phacelia formosula) Status

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of an endangered species or a threatened species. The Act defines an ''endangered species'' as a species that is in danger of extinction throughout all or a significant portion of its range and a ''threatened species'' as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The Act requires that we determine whether a species meets the definition of an endangered species or a threatened species because of any of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) The inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence.

When we listed the North Park phacelia as endangered on September 1, 1982, the Service identified motorcycle use (Factor A), livestock trampling (Factor C), potential energy development of coal and oil and gas (Factor A), and the inadequacy of regulatory mechanisms (Factor D) as threats to the existence of the species (47 FR 38540). In our SSA report, we evaluated these stressors and additional stressors that were identified after the time of listing. Much more is presently known about the species' stressors than at the time of listing.

Several of the stressors identified in the original listing decision are no longer relevant. Given the taxonomic changes, and thus changes to the extent of the known range, that the species has undergone in the past 5 years, motorcycle use (OHV use) (Factor A) is adequately managed in 11 of the 12 populations and existing information indicates this stressor is unlikely to change in the foreseeable future. Mining and energy development (Factor A) have not occurred in occupied habitat since the time of listing and are adequately managed, and existing information indicates this stressor is unlikely to change in the foreseeable future. Although livestock grazing was categorized as a stressor under Factor C at the time of listing, we believe that the effects of livestock grazing are better characterized by Factor A. Livestock grazing does not result in population-level effects and is adequately managed, and existing information indicates this stressor is unlikely to change in the foreseeable future.

Other stressors we considered in the SSA report either do not result in population-level effects (residential and urban development (Factor A) and invasive plants (Factor A)), or the species is tolerant of their effects (climate change (Factor E) and cumulative effects of all stressors (Factor E)).

We also evaluated a variety of conservation efforts and regulatory mechanisms across the 12 populations of North Park phacelia that either reduce or ameliorate stressors and improve or maintain habitat conditions and population resiliency. These conservation efforts and mechanisms include: one BLM RMP and one Service CCP that, when taken together, cover the majority of known occupied habitat (81 percent) and include motorized recreation restrictions, energy development restrictions, and grazing management (BLM 2015a, pp. 2–3, 24–26, 65, 68, 70, H–2; Service 2004, pp. 53, 68). Implementation of the regulatory mechanisms in resource planning documents on all of the BLM and Service lands within the range of the species (Factor D) has helped to address the stressors we identified

under Factors A and E. While we cannot attribute the currently high to moderate resiliency of the species to one specific conservation measure, this high to moderate resiliency demonstrates the amelioration of relevant stressors, both due to the combination of conservation efforts in place and the tolerance of the plant (which has shown an ability to tolerate nearby disturbance).

In addition to the implementation of conservation efforts that minimize impacts to the North Park phacelia on Federal lands (BLM and Refuge lands), approximately 54 percent of the known occupied habitat has special land management designations that limit or exclude the authorization of certain land uses and further help to facilitate the maintenance and recovery of North Park phacelia populations (Factor D) because they are areas where North Park phacelia plants and populations are not likely to be disturbed or adversely altered by land-use actions (BLM 2015a, pp. 2–3, 24–26, 65, 68, 70, H–2; Service 2004, pp. 53, 68). Additionally, approximately 5 percent of the known occupied habitat is private land under conservation easement, with protections and a land management plan specifically designed to protect and maintain North Park phacelia (Byers 2023, entire). The protections provided by these management designations and the conservation easement are not contingent upon the species' federally listed status.

Status Throughout All of Its Range

Endangered Throughout Its Range Determination

Currently, 11 of the 12 populations have high or moderate resiliency, and 1 population has low resiliency (Service 2023, pp. 20–36). The high- and moderate-resiliency populations have moderate to high population-abundance estimates, relatively intact habitat conditions, and a current water deficit that is similar to the historical average. While North Park phacelia tends to occupy relatively small habitat areas, these habitats provide adequate resources to support the species' needs. Rangewide monitoring does not show a clear population trend; however, there is no indication of widespread decline. Recent genetic results have also informed our understanding that North Park phacelia is currently much more abundant than originally estimated at the time of listing.

The only plausible activity or naturally occurring event that would constitute a catastrophic event for North Park phacelia would be extreme drought conditions (meeting or exceeding a GSWD of 27 in (68.6 cm)) sustained over a timeframe that exceeds the species' dormancy in the seedbank. Based on our evaluation of the four plausible future scenarios, there is a low risk of a catastrophic event impacting the species and its redundancy. The individuals within and among the populations also exhibit genetic, ecological, and morphological diversity, contributing to the species' representation.

Moreover, our understanding of the species' stressors has changed since the time the North Park phacelia was listed. Multiple identified stressors are no longer relevant to the species, given past taxonomic changes and subsequent changes in the geographic range of the species (*i.e.,* OHV use and energy development) or because they are not occurring at a scale anticipated at the time of listing (*i.e.,* livestock use). We also have found in our evaluation of other stressors that residential and urban development and invasive species do not result in population-level effects to the species, and North Park phacelia appears to adequately tolerate the effects of climate change (Factor E) and the cumulative effects of all stressors (Factor E) (see *Stressors,* above).

Since the species was listed, conservation efforts and regulatory mechanisms on Federal and private lands have helped to facilitate the maintenance and recovery of North Park phacelia populations. The BLM RMP includes restrictions (motorized use, energy development, and grazing management), stipulations (CSU and NSO), and designations (ACECs) to protect North Park phacelia populations (see *Conservation Efforts and Regulatory Mechanisms,* above). The ACEC designations limit or exclude the authorization of certain land uses, and two ACECs specifically reference the protection of North Park phacelia as a foundational goal. The conservation easement on private lands where North Park phacelia occurs will be maintained in perpetuity to protect and support the species (Byers 2023, entire). The protections provided by the BLM ACEC designations and the conservation easement on private lands are not contingent upon the species' federally listed status. The Service's CCP provides management goals and protections to North Park phacelia, and the likelihood of future CCP revisions including conservation of North Park phacelia is high because the National Wildlife Refuge System Improvement Act (Pub. L. 105–57) mandates conservation of fish, wildlife, and plants and their habitats within the Refuge system.

Given the currently high and moderate levels of resiliency in 11 of the 12 North Park phacelia populations, the lack of significant imminent stressors, and the low likelihood of catastrophic events, we find that North Park phacelia currently has sufficient ability to withstand stochastic and catastrophic events and to adapt to environmental changes.

Thus, after assessing the best available information and evaluating threats to the species and assessing the cumulative effect of the threats under the Act's section 4(a)(1) factors, we conclude that North Park phacelia is not in danger of extinction now throughout all of its range.

Threatened Throughout Its Range Determination

Under the Act, a threatened species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)). The term ''foreseeable future'' extends only so far into the future as the Service can reasonably determine that both the future threats and the species' responses to those threats are likely (50 CFR 424.11(d)). The Service describes the foreseeable future on a case-by-case basis, using the best available data and taking into account considerations such as the listable species' life-history characteristics, threat-projection timeframes, and environmental variability (50 CFR 424.11(d)). The key statutory difference between a threatened species and an endangered species is the timing of when a species may be in danger of extinction, either now (endangered species) or in the foreseeable future (threatened species).

For the purposes of our analysis, we defined the foreseeable future for North Park phacelia to mid-century (2050). After mid-century, the changes in climate conditions that different climate models and emissions scenarios project begin to diverge widely (Bamzai-Dodson and Rangwala 2019, p. 15; Rangwala et al. 2021, pp. 4–5); in other words, the spread of potential projected temperature increases broadens substantially after mid-century. Therefore, we focused our analysis of future condition on mid-century to ''avoid large uncertainty in climate change at the end of the twenty-first century arising from the choice of an emission scenario'' (Rangwala et al. 2021, pp. 4–5). We also selected this timeframe because it is short enough for us to reliably predict changes in other species' stressors and land management, yet long enough to be biologically

meaningful to the species, covering approximately 15 generations, and reliably project the species' response to those changes.

By mid-century, we anticipate a range of plausible future conditions for North Park phacelia under different climate conditions, but the stressors and conservation efforts remain similar to what the species is currently experiencing. Under Scenario 1 (Warm and Wet), we expect the resiliency of each population and the species' redundancy and representation to remain the same as the current conditions. The projected slightly drier conditions would have minimal impact to populations because they are well within the range of variability that the species experienced historically (in the high-condition category for the GSWD metric). In Scenario 2 (Hot and Wet), we expect the resiliency to remain very similar to the current condition (three populations—Diamond J Ranch, Hohnholz North East, and Diamond J State Wildlife Area—drop from high to moderate overall resiliency), and redundancy and representation remain relatively unchanged from the current conditions because of drier conditions (in the moderate-condition category for the GSWD metric). In Scenario 3 (Very Hot and Very Wet), we expect the resiliency of each population and the species' redundancy and representation to remain the same as the current conditions. The projected slightly drier conditions would have minimal impact to populations because they are well within the range of variability that the species experienced historically (in the high-condition category for the GSWD metric). In Scenario 4 (Very Hot and Dry), we expect the resiliency to remain very similar to the current condition (three populations—Diamond J Ranch, Hohnholz North East, and Diamond J State Wildlife Area—drop from high to moderate overall resiliency). Redundancy and representation remain relatively unchanged from the current conditions. The projected slightly drier conditions would have minimal impact to populations because they are well within the range of variability that the species experienced historically (in the high-condition category for the GSWD metric).

Given these future projections of resiliency, redundancy, and representation to mid-century, North Park phacelia could experience a slight decrease in viability under two of the four future scenarios (Scenarios 2 (Hot and Wet) and 4 (Very Hot and Dry)). Even under these two scenarios, the species maintains 11 high- and moderate-resiliency populations despite increasing drought conditions. In all four scenarios, we expect 11 of the 12 populations will maintain viability (will have moderate to high resiliency), and all 12 populations will remain extant, thereby continuing to contribute to the redundancy and representation of the species.

Three factors support this consistently moderate to high future resiliency: Federal and private conservation efforts and regulatory mechanisms, stressors that are not likely to increase in the future, and the species' biological characteristics.

First, the high to moderate resiliency of North Park phacelia is, in part, due to land protections and regulations implemented by BLM, the Service, private landowners, and The Nature Conservancy that will continue to be implemented into the future, even in the absence of protections afforded by the Act (Factor D), as described under *Conservation Efforts and Regulatory Mechanisms,* above. These protections will continue to limit the potential effects of stressors on North Park phacelia in the future. OHV use (Factor A), livestock grazing (Factor A), energy development (Factor A), and invasive plants (Factor A) are adequately managed, and existing information indicates these stressors are unlikely to change in the foreseeable future. The existing regulatory mechanisms (Factor D) are sufficient to ensure protection of the species at the reduced levels of stressors that remain.

Second, independent of future conservation efforts and regulatory mechanisms, the high to moderate resiliency of North Park phacelia is, in part, due to some stressors not increasing in the future. Residential and urban development (Factor A) within North Park phacelia populations has not occurred since the time of listing, and existing information indicates this stressor is unlikely to change in the foreseeable future.

Third, the species' biological characteristics confer some tolerance to moderate its response to projected drier conditions. North Park phacelia appears to adequately tolerate the effects of climate change (Factor E) and cumulative effects of all stressors (Factor E), and existing information indicates that this tolerance is unlikely to substantially change in the foreseeable future. Although conditions could become drier under two future scenarios (Scenarios 2 (Hot and Wet) and 4 (Very Hot and Dry)), populations have maintained healthy recruitment and survival, even through two recent extreme drought years (2012 and 2020) (see *Stressors,* above). These characteristics allow the species to maintain moderate survivorship and resiliency, even under Scenarios 2 (Hot and Wet) and 4 (Very Hot and Dry).

Considering the levels of resiliency, redundancy, and representation projected under each of the future scenarios described in the SSA report, North Park phacelia will be able to withstand stochastic events, catastrophic events, and environmental change into the foreseeable future. Therefore, after assessing the best available information and evaluating threats to the species and assessing the cumulative effect of the threats under the Act's section 4(a)(1) factors, we conclude that North Park phacelia is not likely to become in danger of extinction within the foreseeable future throughout all of its range.

Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. Having determined that the North Park phacelia is not in danger of extinction or likely to become so in the foreseeable future throughout all of its range, we now consider whether it may be in danger of extinction (*i.e.,* endangered) or likely to become so in the foreseeable future (*i.e.,* threatened) in a significant portion of its range—that is, whether there is any portion of the species' range for which both (1) the portion is significant; and (2) the species is in danger of extinction or likely to become so in the foreseeable future in that portion. Depending on the case, it might be more efficient for us to address the ''significance'' question or the ''status'' question first. We can choose to address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species' range.

In undertaking this analysis for the North Park phacelia, we chose to address the status question first. We began by identifying portions of the range where the biological status of the species may be different from its biological status elsewhere in its range. For this purpose, we considered information pertaining to the geographic distribution of (a) individuals of the species, (b) the threats that the species faces, and (c) the resiliency condition of populations.

We evaluated the range of the North Park phacelia to determine if the species

is in danger of extinction now or likely to become so in the foreseeable future in any portion of its range. The range of a species can theoretically be divided into portions in an infinite number of ways. We focused our analysis on portions of the species' range that may meet the definition of an endangered species or a threatened species. For North Park phacelia, we considered whether the threats or their effects on the species are greater in any biologically meaningful portion of the species' range than in other portions such that the species is in danger of extinction now or likely to become so in the foreseeable future in that portion. We examined the following threats: residential and urban development, OHV use, mining and energy development, livestock grazing, invasive plants, climate change, and cumulative effects of all stressors.

Livestock grazing, invasive plants, and climate change occur uniformly across the species' range; that is, there are no portions of the species' range where these stressors occur more intensely or have greater impacts on the species. Residential and urban development and mining and energy development have occurred and are present in the North Park and Larimer River basins. However, despite past development activity, these threats do not currently negatively impact population resiliency in these basins and are not expected to increase in the future. Ten of the 11 populations in the North Park and Larimer River basins currently have high or moderate resiliency and are expected to maintain high or moderate population resiliency under all four scenarios. OHV use has occurred in five populations, but this threat is only negatively impacting the population resiliency of the Airport population. This is the only population (Airport) that currently has low resiliency due in part to extensive OHV use, and this population is expected to maintain low resiliency under all four future scenarios. Therefore, we identified this population as a portion of the range that may potentially have a different status than the species as a whole and was worth further consideration. We now assess whether the Airport population is ''significant.'' We do not consider this population, by itself, to represent a biologically meaningful portion of the range. The Airport population has a small population size and small habitat area and contributes the least out of all of the known populations to the species' resiliency, redundancy, and representation. It is one of eight populations in the North Park basin that share similar soil and habitat characteristics (see Background, above). The other seven populations in the North Park basin are larger in size and habitat area and have high or moderate current resiliency and are expected to maintain high or moderate population resiliency under all four future scenarios. Therefore, although the Airport population may have a difference in status relative to other populations of North Park phacelia, we determined that, by itself, it is not significant.

We looked across the remainder of the range of the species for any other portions of the range that may have a different status than the species as a whole, but we did not identify any others. For example, we also explored the status of North Park phacelia in the Troublesome Creek and Larimer River basins, respectively, due to their isolation from the core of the species' range in the North Park basin. The Troublesome Creek basin has one population (Troublesome Creek ACEC) with a large population size and moderate current resiliency and is expected to maintain moderate resiliency under all four future scenarios. The Larimer River basin has three populations (Hohnholz North East, Forrester Creek, and Laramie River–Bull Mountain) with high and moderate current resiliency, and they are expected to maintain their current resiliency under all four future scenarios. Therefore, none of these areas differs in status from the species as a whole, and we did not consider them further.

The Airport population does not represent a significant portion of the range; therefore, we find that the species is not in danger of extinction now or likely to become so in the foreseeable future in any significant portion of its range. This does not conflict with the courts' holdings in *Desert Survivors* v. *Department of the Interior,* 321 F. Supp. 3d 1011, 1070–74 (N.D. Cal. 2018) and *Center for Biological Diversity* v. *Jewell,* 248 F. Supp. 3d 946, 959 (D. Ariz. 2017) because, in reaching this conclusion, we did not apply the aspects of the Final Policy on Interpretation of the Phrase ''Significant Portion of Its Range'' in the Endangered Species Act's Definitions of ''Endangered Species'' and ''Threatened Species'' (79 FR 37578; July 1, 2014), including the definition of ''significant'' that those court decisions held to be invalid.

Determination of Status

Our review of the best scientific and commercial data available indicates that the North Park phacelia does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. In accordance with our regulations at 50 CFR 424.11€(2), North Park phacelia does not meet the definition of an endangered or a threatened species. Therefore, we propose to remove North Park phacelia from the Federal List of Endangered and Threatened Plants.

Effects of This Proposed Rule

This proposed rule, if made final, would revise 50 CFR 17.12(h) by removing North Park phacelia from the Federal List of Endangered and Threatened Plants. The prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, would no longer apply to this species. Federal agencies would no longer be required to consult with the Service under section 7 of the Act in the event that activities they authorize, fund, or carry out may affect North Park phacelia. No critical habitat is designated for this species, so this proposed rulemaking action would not affect 50 CFR 17.96.

Post-Delisting Monitoring

Section 4(g)(1) of the Act requires us, in cooperation with the States, to implement a monitoring program for not less than 5 years for all species that have been recovered. Post-delisting monitoring (PDM) refers to activities undertaken to verify that a species delisted due to recovery remains secure from the risk of extinction after the protections of the Act no longer apply. The primary goal of PDM is to monitor the species to ensure that its status does not deteriorate, and if a decline is detected, to take measures to halt the decline so that proposing it as endangered or threatened is not again needed. If at any time during the monitoring period data indicate that protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing.

We have prepared a draft PDM plan for North Park phacelia. The draft PDM plan discusses the current status of the taxon and describes the methods proposed for monitoring if we delist the taxon. The draft PDM plan: (1) Summarizes the status of North Park phacelia at the time of proposed delisting; (2) describes the frequency and duration of monitoring; (3) discusses monitoring methods and potential sampling regimes; (4) defines what potential triggers will be evaluated to address the need for additional monitoring; (5) outlines reporting requirements and procedures; (6)

proposes a schedule for implementing the PDM plan; and (7) defines responsibilities. We intend to work with our partners toward maintaining the recovered status of North Park phacelia. We appreciate any information on what should be included in post-delisting monitoring strategies for this species (see Information Requested, above).

Required Determinations

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with federally recognized Tribes on a government-to-government basis. In accordance with Secretaries' Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We notified the Apache Tribe of Oklahoma, Eastern Shoshone Tribe, Eastern Shoshone and Northern Arapaho Tribes of the Wind River Reservation, Northern Cheyenne Tribe, Southern Ute Indian Tribe, Ute Mountain Ute Tribe, and the Ute Indian Tribe of our recommendation to delist North Park phacelia in our 5-year status review in 2021, and we did not receive a response. We are not aware of any Tribal interests or concerns associated with this proposed rule.

References Cited

A complete list of references cited in this rulemaking is available on the internet at *https://www.regulations.gov* and upon request from the Colorado Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff members of the Fish and Wildlife Service's Species Assessment Team and the Colorado Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Plants, Reporting and recordkeeping requirements, Transportation, Wildlife.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

■ 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245, unless otherwise noted.

■ 2. In § 17.12, amend paragraph (h) in the List of Endangered and Threatened Plants by removing the entry under Flowering Plants for ''*Phacelia formosula* (North Park phacelia)''.

Martha Williams,

Director, U.S. Fish and Wildlife Service.

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